Addressing climate change risks to farming systems in Turkmenistan at national and community level

Turkmenistan

Agency: United Nations Development Programme
Executing Agency: Ministry of Nature Protection
UNDP PIMS: 4450, UNDP Atlas Project Number: 00074953

Mid-term Evaluation Report

December 8, 2014

Photo: Project-supported construction of a sardob, a traditional water storage pit for collecting surface run-off from the nearby natural Takyr depression, in the Yerbent Region of the Karakum desert.

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Acronyms

AF	Adaptation Fund
ALM	Adaptation Learning Mechanism
AWP	Annual Work Plan
CAF	Cancun Adaptation Framework
CBM	Cubic meters
CDR	Combined Delivery Report
CO	Country Office
CP	Country Programme
CPAP	Country Programme Action Plan
CPD	Country Programme Document
CRM	Climate Risk Management project
CSO	Civil society organization
GDP	Gross Domestic Product
HA	Hectares
ICTA	International Chief Technical Advisor
KM	Kilometers
M&E	Monitoring and evaluation
MIE	Multilateral Implementing Entity
MOU	Memorandum of Understanding
MSP	Medium-sized Project
MTE	Mid-term Evaluation
MWE	Ministry of Water Economy
NAPA	National Adaptation Programme of Action
NAP	National Adaptation Plan
NEX	National Execution
NGO	Non-Governmental Organization
NIE	National Implementing Entity
NPD	National Project Director
NPM	National Project Manager
OECD-DAC	Organization for Economic Co-operation and Development – Development Assistance Committee
PID	Project Initiation Document
PIF	Project Identification Form
PMU	Project Management Unit
PPR	Project Progress Report
PSC	Project Steering Committee
RBM	Results-based Management
RTA	Regional Technical Advisor
SLM	Sustainable Land Management
TORs	Terms of Reference
UNFCCC	United Nations Framework Convention on Climate Change
UNDAF	United Nations Development Assistance Framework
UNDP	United Nations Development Programme
USD	United States dollars
VCA	Climate vulnerability assessment
WUA	Water User Association
WUG	Water User Group

I. Executive Summary

Table 1 Project Summary Data

Project Title:	*Addressing climate change risks to farming systems in Turkmenistan at national and community level*			
UNDP PIMS ID:	4450		*At endorsement (US$)*	*At completion (US$)*
UNDP ATLAS Project ID:	00074953 / TKM10	AF financing:	$2,700,000	N/A
Country:	Turkmenistan	IA/EA own:	$0	N/A
Region:	Eastern Europe and Central Asia	Government:	$0	N/A
Focal Area:	Climate Change Adaptation	Other:	$0	N/A
Sectors:	Agriculture, Water Management	Total co-financing:	$0	N/A
Executing Agency:	Ministry of Nature Protection	Total Project Grant Cost:	$2,700,000	N/A
Other Partners Involved:	UNOPS, other government ministries relevant for water management	ProDoc Signature (date project began):		April 12, 2011
		(Operational) Closing Date:	Proposed: June 2016	Actual: N/A

1. The Turkmenistan Farming Systems Adaptation project was funded by the Adaptation Fund with a grant amount of $2.70 million United States dollars (USD) (not including $0.23 in project implementation fees), and $0.00 planned co-financing. The United Nations Development Programme (UNDP) is the Multilateral Implementing Entity (MIE), with the Ministry of Nature Protection as the National Executing Entity. The project has an originally planned approximately five-year implementation period, from June 2011 to June 2016.[1]

2. As stated in the project document, the project objective is to *"strengthen water management practices at both local and national levels in response to climate change-induced water scarcity risks that are increasingly affecting farming systems in Turkmenistan."* As discussed in the project document, "*Water availability and supply are likely to suffer from increasing shortages due to elevated temperatures, overall climate aridification and competition for water arising from regional trans-boundary water issues. Turkmenistan's inherent aridity and reliance on agriculture as a source of both income and food renders the country particularly vulnerable to these climate change impacts*."

3. The specific projected climate impacts that may affect the agriculture sector include:

- An increase in average annual temperature of between 4.2 and 6.1°C by 2050, which will include an increase in the number of extremely hot days (i.e. days over 40°C);
- A reduction in annual average rainfall of between 15 and 56% by 2050;
- An increase in average regional evaporation rates of 48% by 2050;

[1] As per the project document projected calendar. However, the inception workshop was not held until May 22, 2012, and other sources, such as the PPR, currently indicate planned project completion in September 2016.

- An increase in the frequency and intensity of drought and flood spells;
- A 15% reduction in flow rates for the Amu Darya; and
- A 30% reduction in flow rates for other river systems.

4. As outlined in the project summary for the Adaptation Fund, the project seeks to strengthen water management practices and legislation at the national and local levels to support the adoption of high efficiency irrigation techniques. This is important for local communities in that currently water is diverted away from private sector agriculture and horticulture towards strategic state crops. Economic evidence will be used to support water and agriculture modeling activities undertaken separately by the Ministries of Water Management and Agriculture. On the basis of economic outputs, it is expected that the project will support the reframing of water legislation to include climate change considerations, and help introduce regulations that support progressive water pricing and the communal management of water delivery services. The project will seek to demonstrate the costs and benefits of community level approaches, including water user associations, drip irrigation, water points, saksaul planting, and irrigation canal maintenance. The lessons from these regional pilots will be used not only to inform the legislative reform process relating to land management and water use/pricing, but will also inform the development of larger scale communal management systems and their integration into the government's social development and poverty alleviation strategy. The work of Water User Associations (WUAs) will be supported, and funds provided for WUA led community adaptation plans and concrete investments in water management systems and infrastructure.

5. The project objective is planned to be achieved through three main components:

- **Component 1: Policy and Institutional Capacity Strengthening**
- **Component 2: Community Based Adaptation Initiatives**
- **Component 3: Communal Management Systems for Water Delivery**

6. The project results framework, with expected indicators and targets, is included as section III.D of the project document. The project results framework represents the primary foundational element for assessing project results (progress toward the expected outcomes and objective) and effectiveness.

SUMMARY OF CONCLUSIONS

7. The project experienced an initial slow start-up process related to multiple factors, including formal government registration as a foreign assistance project, staff turnover, and other factors. However, since the project has been fully up and running, from approximately April 2013, there has been significant progress in implementation of the project workplan, and multiple on-the-ground results have already been achieved. The project faces some risks in terms of what the ultimate level of achievement in some of the key results areas will be, such as the revision of the Water Code, and adoption of legislation related to the Water User Associations by the Government of Turkmenistan. The final significance and achievement of results will need to be further assessed at project completion.

8. For the evaluation criteria of **relevance**, the project is considered ***relevant*** to Turkmenistan's national climate adaptation needs and priorities, and the project is highly relevant to the climate adaptation needs and priorities of the local communities in the three pilot regions of Nohur, Karakum, and Sakarchaga. The project objective is also relevant to the Adaptation Fund's strategic priorities, UNDP's strategic objectives for Turkmenistan, and the Cancun Adaptation Framework under the UNFCCC. The project strategy and design is logical and cohesive, but is considered less than fully relevant, as it presents some risks in relation to maladaptation, and does not fully address some critical water management inefficiency drivers, such as pricing incentives and mechanisms at the farmer level.

9. The Turkmenistan farming systems project **efficiency** is rated ***moderately satisfactory***. Due to problems with project start-up following approval, the project is approximately 12-15 months behind the originally planned schedule. The delay has not had significant negative effects on the project's ability to achieve its expected outcomes, because the on-the ground activities are rapidly being brought up to speed, and the foreseen water code revision was also delayed by the government, so the project's contribution is still timely. The total project disbursement rate, at 35.3%, is lower than it should be at this stage of the project's life – officially 55% complete in terms of time. However, since April 2013 the monthly disbursement rate has increased six-fold: from an average of 0.3% of the project budget per month during the first 16 months, to an average of 1.7% per month during the past 18 months. While annual delivery of the planned budget is rising, it is still low, at 44.9% for 2014 as of late September. At the same time, project management costs have not outpaced project activity spending, and at 11.1% of current total expenditure, are roughly in line with the planned project management expenditure of 9.3%. The project has also applied good adaptive management, and has secured $346,000 in co-financing, although no co-financing was officially committed at project approval. The project management arrangements are working well, and the project has applied an appropriate partnership approach, including excellent collaboration with the UNDP CRM project, and with other relevant projects undertaken by the Ministry of Water Resources.

10. The project **results** thus far and overall progress toward the expected outcomes is considered ***satisfactory***. Following the initial slow project start-up, significant progress and results have been achieved in the 18 months leading up to the mid-term evaluation. The project has a total of 16 indicators, and the progress of project activities is such that achievement of 13 of the indicator targets is considered likely by the end of the project. For the remaining three indicators achievement is uncertain, but still possible. The project is making good progress on Outcome 1 and 2, while the eventual results under Outcome 3 are slightly less certain. Key results produced as of October 2014 include:

- Multiple expert policy recommendation documents provided to the government for considering in the anticipated upcoming revision of the Water Code, and development of associated regulations, as well as related legislation such as the Law on Daihan associations;
- Critical work on development of a proposal for a water tariff regime;
- Completion of multiple on-the-ground water infrastructure improvement projects across the three pilot regions, including:

- Nohur: Construction of eight small-scale dams (three of which were only planned for 2015), along with multiple other small-scale investments related to use of natural springs, water storage facilities and drip irrigation;
- Karakum: Construction and repair of 13 wells, and other traditional water access infrastructure (sardobs, takyrs, and kaks), as well as sand dune fixation of 10 hectares;
- Sakarchaga: Implementation of five field-level water-regulating devices in irrigation canals, and significant progress toward implementation of an additional 13 structures by the end of 2014. In addition, there has been significant progress toward cleaning and repair of 31.5 km of irrigation canals.

- Completed community climate vulnerability assessment report for the three pilot regions;
- Numerous community-level capacity development activities related to establishing and operationalizing Water User Associations, including many training activities;
- Concrete positive results through partnerships with other relevant projects:
  - Synergies with the UNDP CRM project, which is addressing related issues, and has also supported implementation of adaptation measures in the three pilot regions;
  - Cooperation with the Ministry of Water Resources for the reconstruction of the discharge drainage, financed by the state budget; and
  - Cooperation with the "Zakhmet" Farmers' Association to introduce modern irrigation methods for winter wheat in 300 hectares, financed by the association.

11. The **effectiveness** of the project thus far is considered ***moderately satisfactory***; even if the project completes its planned activities, it is not fully clear to what extent the project will contribute to more climate-resilient water management. Government institutions and the overall agricultural and water management system (including pricing structures and mechanisms) have a significant influence on the ability of communities to efficiently manage their water resources. The effectiveness of the project will ultimately depend on A.) The extent to which the project influences legislation, policy, and regulation development; B.) The extent to which the lessons from field-level demonstration activities are documented and shared, and if these activities are scaled-up within and beyond the pilot regions; and C.) The extent to which the Water User Associations become functioning and self-sustaining entities that can actually influence water use and management practices. At this stage, these all remain open questions. There is also a risk of the project contributing to maladaptation: By increasing and extending irrigation infrastructure and water points the project could inadvertently incentivize the expansion of agricultural lands and livestock herds to a level that would again be on the margin of risk related to any future significant climate impacts, such as greatly reduced rainfall, or rainfall with higher seasonal variability. The project team and experts working on the project are conscious of this risk and are working to limit it.

12. While a **sustainability** rating is provided here as required, sustainability is a temporal and dynamic state that is influenced by a broad range of constantly shifting factors. When evaluating sustainability, the greater the time horizon, the lower the degree of certainty possible. In addition, by definition, mid-term evaluations are not well-positioned to provide ratings on sustainability considering that many more activities will be undertaken before project end that may positively or negatively affect the likelihood of sustainability. The overall sustainability rating

for the Turkmenistan farming systems project for this mid-term evaluation is ***moderately likely*.** The project has activities focused at different levels (field level vs. policy level), so sustainability of the different types of results may vary. However, there do not appear to be critical risks to the sustainability of project results. At the field level the project results appear to have good stakeholder ownership from local level stakeholders, with a slightly lower level of ownership in Sakarchaga at the current point in time. At the national policy level, if the project succeeds in having its amendments and revisions incorporated into water policy and legislation then it is expected that result would be sustained for a significant period of time.

RECOMMENDATIONS

13. The recommendations from the mid-term evaluation are summarized below. The primary target audience for each recommendation is identified in brackets at the end of the recommendation text.

14. ***Recommendation 1:*** The critical element for the Turkmenistan AF project to achieve transformational changes in Turkmenistan is the extent to which the demonstration activities advocated by the project are taken up and incorporated in broader government investment plans for the water sector. The experiences and lessons from the project pilot sites need to be shared broadly with the communities in the regions of the pilot areas, and integrated with government planning for those regions. To support this long-term goal the project needs to continue to emphasize and focus on documenting and disseminating information and experiences from the project pilot regions. Activities such as widespread adoption of drip-irrigation, and community-based management of water resources could represent transformational change in Turkmenistan, but a pathway must be built from the activities of this project to the targeted long-term results. There must continue to be a focus on replication and catalyzing up-scaling of the climate resilient water management approaches supported by the project. More specifically, the project must undertake direct measures to document and disseminate the experiences of the pilot regions, with dissemination of information at the sub-national and national levels. *[UNDP, Government of Turkmenistan]*

15. ***Recommendation 2:*** The Turkmenistan AF project had a slow initial start, but implementation progress has been impressive over the past 18 months. To avoid a significantly extended project completion timeframe, the project must continue to ensure that financial delivery continues apace. On a month-to-month basis the project team must closely track annual financial delivery, and take any measures necessary to ensure that a high level of annual financial delivery is achieved. The project team and UNDP should work to ensure that the project is completed as close to the original timeframe as expected, to ensure overall cost-efficiency and maintain the relative level of management costs. A six-month no-cost extension may be necessary, but should only be considered if additional time is required to complete key project results, such as revision of the water code and associated regulatory changes. It is anticipated that the field-level project activities can be completed within the anticipated remaining time. *[UNDP, PMU, Steering Committee]*

16. ***Recommendation 3:*** The project must ensure there is consistent and adequate technical and human resource capacity to ensure successful implementation. The project implementation approach has been successful, but there may be some changes in the second half of the project

– notably, the project CTA's contract will be expiring. This specific change may not be a critical risk, but the project partners must continue to monitor to ensure that the project has adequate implementation arrangements and human resources to continue the strong progress seen in the past 18 months. This may require contracting additional international expertise, or expanding the terms of reference of individuals currently engaged with the project. *[UNDP, Government of Turkmenistan]*

17. ***Recommendation 4:*** This evaluation recommends that an audit be conducted for 2014, to confirm that the issues identified in the 2012 audit have been adequately addressed. [UNDP, PMU]

18. ***Recommendation 5:*** To strengthen the value of the field-level demonstration activities, the project should work to clearly document the cost-benefit analysis of the various water management activities and infrastructure investments undertaken. Financial data is often a critical element of advocacy at both the local and national level. Clearly demonstrating the financial value of the approaches the project is demonstrating (e.g. drip irrigation, etc.), would be highly useful for catalyzing replication and up-scaling. *[PMU, Steering Committee]*

19. ***Recommendation 6:*** The project has made valuable progress in demonstrating specific water management technologies in the pilot regions, but there may be opportunities to further strengthen the climate resilience of the agriculture-based rural livelihoods of the communities in the pilot regions, to allow communities to receive greater economic benefit with less water use. The project should consider the overall economic picture related to water-dependent livelihoods in the pilot communities, and assess the feasibility of additional value-added processing for key commodities related to the specific agricultural products the project is already supporting. However, it is critical to keep the linkage to climate resilience, ensuring that any activities supported represent long-term sustainable adaptations to climate change. *[PMU, Steering Committee]*

20. ***Recommendation 7:*** To support the previous recommendation on information dissemination, the project should strengthen the awareness and outreach activities, at the national and local level. The project has been highly dynamic in producing news releases and information available to the international community, but a similar level of effort needs to be concentrated on the communities neighboring the specific pilot regions, to disseminate the project experiences to other climate-risk communities, as well as to policy makers. One specific approach could be to organize a national end-of-project conference to share and widely disseminate the final project lessons and experiences. *[PMU, Steering Committee]*

21. ***Recommendation 8:*** The Turkmenistan AF project has significance at various national levels in terms of Turkmenistan's efforts to respond to climate change. One further important way that the project could provide highly useful outputs would be to specifically contribute to the development of the National Adaptation Plan (NAP), currently in the initial stages of development. *[PMU, UNDP, Government of Turkmenistan]*

22. ***Recommendation 9:*** The project should further extend its stakeholder engagement at the national level. At the field level the Turkmenistan AF project appears to have been highly successful in engaging the local communities, and building stakeholder ownership. Key national-level institutions have been involved as well, but there remain opportunities to engage additional relevant national stakeholders. These include, for example, the Animal Husbandry State

Association (particularly in the context of the Karakum and Nohur pilot regions). Also, for example, one of the agricultural universities has a pilot site for testing irrigation techniques that is located very near to Ashgabat, which could be leveraged as a valuable partnership for the project in multiple ways. Another important stakeholder that has not been highly engaged thus far is the state committee on emergency situations. *[PMU, Steering Committee]*

SUMMARY RATINGS TABLE

Category	Rating
Progress Toward Results	
Project Design	MS
Relevance	*Relevant / S*
Progress Toward Outcomes	S
Results	*S*
Effectiveness	*MS*
Adaptive Management	
Work Planning	S
Finance and Co-finance	MS
Monitoring and Evaluation Systems	S
Risk Management	S
Reporting	S
Management Arrangements	S
Efficiency	MS
Quality of Execution	MS
Quality of Implementation, Including UNDP's Role	MS
Sustainability	
Overall Likelihood of Sustainability of Results	ML
Financial and Economic Risks	ML
Socio-political Risks	ML
Institutional Framework and Governance Risks	ML
Environmental Risks	L

II. Turkmenistan Adaptation Mid-term Evaluation Approach

A. Mid-term Evaluation Purpose and Objectives

23. The **purpose** of the evaluation is to provide an independent external view of the progress of the Turkmenistan AF project at its approximate mid-point, and to provide feedback and recommendations to UNDP and project stakeholders that can help strengthen the project and ensure its success during the second half of implementation.

24. The **objective** of the evaluation is identify potential project design problems, evaluate progress towards the achievement of the project objective, identify and document lessons learned (including lessons that might improve design and implementation of other UNDP supported AF projects), and make recommendations regarding specific actions that should be taken to support project success during the remainder of its implementation. The MTE will evaluate early signs of project success or failure and identify the necessary changes to be made.

25. As outlined in the AF M&E framework, the objectives of the evaluation also include:

- To promote accountability and transparency within the AF, and to systematically assess and disclose levels of project or programme accomplishments. Are programs and projects achieving what they were intended to achieve? An evaluation validates results and can make overall judgments about the extent the intended and unintended results were achieved (e.g., increased resilience, decreased vulnerability, improved cost-effectiveness).
- To organize and synthesize experiences and lessons that may help improve the selection, design, implementation, and evaluation of future AF funded interventions. What worked or what did not work and why? How project achievements contribute to the mandate of the AF. Aggregated analysis and reporting of individual project achievements provide evidence of the effectiveness of AF operations in achieving its goal.
- Feedback into the decision-making process to improve ongoing and future projects, programmes, and policies.
- Assessment of the relevance, effectiveness, and efficiency of project design, objectives, and performance.

B. Mid-term Evaluation Scope

26. The **scope** of the evaluation is outlined in the Terms of Reference (TORs) for the evaluation (attached as Annex 1 to this evaluation report), including coverage of the three categories of project progress:

- Progress toward results
    - Project Design
    - Progress Toward Expected Outcomes and Objective
- Adaptive management
    - Work Planning
    - Finance and Co-finance
    - Monitoring Systems
    - Risk Management

  - Reporting
- Management arrangements
  - Quality of Execution
  - Quality of Implementation, including support provided by UNDP

27. As outlined in the AF M&E framework, the scope of the evaluation also includes:

- Achievement of project outcomes, including ratings and with particular consideration of achievements related to the proposed concrete adaptation measures, if applicable;
- Contribution of project achievements to the AF targets, objectives, impact and goal, including report on AF standard/core indicators;
- Risks to sustainability of project outcomes at project completion and progress towards impacts including ratings;
- Processes influencing achievement of project results, including an assessment of the preparation and readiness, country ownership, stakeholder involvement, financial management, NIE/MIE supervision and backstopping; and project start up and implementation delays;
- M&E systems;
- Preparation and readiness;
- Country ownership;
- Stakeholder involvement;
- Financial management;
- Implementing Entity supervision and backstopping;
- Delays in project start up and implementation;

28. The evaluation was conducted based on five **main evaluation criteria**, as identified by the OECD-DAC, and the AF Evaluation Framework:

- *Relevance* of the AF and funded projects: to local and national sustainable development plans, priorities, and policies; poverty alleviation plans; national communications or adaptation programmes, and other relevant instruments; objectives of the AF; and the guidance from the Convention.
- *Effectiveness:* The extent to which the intended outcome(s) has (have) been achieved or how likely it (they) will be achieved.
- *Efficiency:* A measurement of how economically the funds, expertise, time, etc. provided by the AF have been converted into results.
- *Impact:* The positive/negative and unforeseen changes to, and effects produced by, the AF support, individually or at the aggregated level.
- *Sustainability***:** Likelihood of continued benefits for an extended period of time after project completion
  - Financial risks
  - Socio-political risks

- Institutional framework and governance risks
- Environmental risks

29. In addition to these criteria, AF project evaluations should report on ***results*** achieved and against those agreed upon in the RBM framework. Results include direct outputs, short- to medium-term outcomes, and longer-term impacts.

30. In addition, the UNDP requires that all evaluations assess the **mainstreaming of UNDP programming principles**, which include:

- UNDAF/CPAP/CPD Linkages
- Poverty-Environment Nexus / Sustainable Livelihoods
- Disaster Risk Reduction / Climate Change Mitigation / Climate Change Adaptation
- Crisis Prevention and Recovery
- Gender Equality / Mainstreaming
- Capacity Development
- Rights-based Approach

31. The performance standards, indicators and metrics for assessing the evaluation criteria are presented in the mid-term Evaluation Matrix, which is attached as Annex 2 to this evaluation report. The evaluation provides ratings on the required elements and the main evaluation criteria, based on the six-point ratings system indicated in the TORs. The ratings system and draft ratings table to be applied are included as Annex 3 to this evaluation report.

C. Principles for Design and Execution of the Evaluation

32. The AF M&E Framework references **principles for evaluation**, though these are not clearly stated. In lieu of this reference, this evaluation ascribes to the principles outlined in the GEF M&E policy,[2] as follows:

- Credibility
- Utility
- Impartiality
- Transparency
- Disclosure
- Participation

33. The evaluation will also be conducted in line with United Nations Evaluation Group norms and standards.[3]

34. The evaluator worked closely with UNDP to ensure a collaborative approach and strong communication throughout the evaluation process.

[2] See http://www.thegef.org/gef/Evaluation%20Policy%202010.

[3] See http://www.uneval.org/normsandstandards/index.jsp?doc_cat_source_id=4.

D. Evaluation Approach and Data Collection Methods

35. The evaluation was carried out in accordance with the guidance outlined in the UNDP Handbook on Planning, Monitoring and Evaluating for Development Results.[4] The evaluation was also conducted in accordance with the evaluation guidance as outlined in the AF Evaluation Framework.[5]

36. A basic inception report was provided, outlining in greater detail the objectives and scope of the evaluation, the main evaluation criteria, and performance standards to be assessed. The inception report also outlined the process and timeframe for the evaluation. The evaluation employed a participatory, mixed-methods approach, with three main data collection methods. These included:

- Desk review of relevant project documentation. (The summary list of documents reviewed is attached as Annex 4 to this evaluation report).
- Interviews with key stakeholders, including some multi-person focus group interviews.
- Visits to the three project field sites, in the regions of Karakum, Nohur, and Sakarchaga.

37. Individuals targeted for interviews were intended to represent the main project stakeholders, partners and beneficiaries, and those most knowledgeable about various aspects of the project. The interview guide used for qualitative data collection is included as Annex 5 to this evaluation report. The evaluation also sought to include a representative sample covering all different types of stakeholders, including national and local government, civil society, local communities, and the private sector. The list of persons interviewed and met for the evaluation is included with Annex 6 to this evaluation report.

38. The principal responsibility for managing this evaluation resides with the UNDP Country Office (UNDP CO) in Ashgabat, Turkmenistan. The draft evaluation itinerary is included as Annex 6 to this evaluation report. The itinerary was developed by the evaluator, in consultation with UNDP and the project team.

E. Limitations to the Evaluation

39. All evaluations face limitations in terms of the time and resources available to adequately collect and analyze evaluative evidence. For the Turkmenistan AF project mid-term evaluation the evaluator was not able to personally visit all field locations where project investments have been made, though sites were visited in all three project pilot regions. Also, as is understandable, some project documents were available only in Russian or Turkmen language, although the project team and UNDP worked to ensure that language was not a barrier to the collection of evaluative evidence. In addition, all key documents were available in English. Altogether the evaluation challenges were not significant, and the evaluation is believed to represent a fair and accurate assessment of the project.

[4] See http://www.undp.org/evaluation/handbook.

[5] See https://www.adaptation-fund.org/content/evaluation-framework.

III. Project Overview

A. Turkmenistan Development Context[6]

40. The agriculture sector of Turkmenistan is hugely capital and labor intensive. Despite the purchase of large scale agricultural machinery, the sector remains relatively unproductive. The agricultural industry is mainly owned and controlled by the state, with a few private producers and farm businesses starting to emerge in livestock, agricultural and processing sectors over the last decade. The main crops mandated by the state are cotton and wheat, as well as smaller amounts of rice and sugar beet. Almost all public investment is directed to production of these two strategic crops, based on an economic policy of self-sufficiency in grains and maintaining the export potential for cotton products.

41. The agricultural sector is the main consumer of water within Turkmenistan. Agriculture is a critical sector of the economy accounting for almost one-fifth of GDP and is a source of livelihood for half of the population. Turkmenistan took an initial step in 1997-1998 in changing the status of most farmers to "lease-holders." However, in practice, the rural economy continues to operate primarily under state control, with the government controlling both inputs and providing a market for produce for strategic crops (cotton, wheat, rice, and sugar beet). Virtually all cotton and wheat crops are grown under the system of state mandate and procured by the state at below-market prices. Some initial positive steps to initiate reforms of this system for cotton have been recently taken by the government. To improve the productivity of these crops, the government provides some incentives to farmers. These incentives are mainly provided to commercial farmers (who are involved in the large-scale production of wheat, cotton or rice) and not to the rural poor (who rely largely on subsistence farming of grains, melons and vegetables, or local markets).

42. About 1,385,045 square kilometers of land is drained by the Amu Darya into the Aral Sea basin. This includes most of Tajikistan, the southwest corner of Kyrgyzstan, the northeast corner of Afghanistan, a long narrow portion of eastern Turkmenistan and about half of Uzbekistan. The primary source of water for the agriculture sector in Turkmenistan is the Karakum canal, drawing off the Amy Darya River, on Turkmenistan's northern border with Uzbekistan. The Karakum canal is one of the largest irrigation and water supply canals in the world. Started in 1954, and completed in 1988, it is navigable over much of its 1,375-kilometre length, and carries 13 cubic kilometers of water annually from the Amu-Darya River across the Karakum Desert in Turkmenistan. The canal opened up huge new tracts of land to agriculture, especially to cotton monoculture heavily promoted during Soviet Union times, and supplies Ashgabat with a major source of water.[7]

43. Climate observations show that the air temperature is steadily increasing in Turkmenistan as in the whole of Central Asia. Precipitation will become more variable, with increased frequency and intensity of drought and flood spells. Glacial retreat in Pamir-Altai will have significant impacts on water flows of the Amu Darya River. As a result, significant decreases in water supply

[6] Note that the project development context section is primarily drawn from the project document, with edits as appropriate.

[7] Source: Wikipedia, as accessed on December 9, 2014.

and agricultural production are expected. It is estimated that 30% of glaciers feeding the waters of Turkmenistan have already been lost during the past century, as a result of global warming. This is particularly alarming for the country whose water runoff formation is fully dependent on natural flow from glaciers. A trans-boundary river, the Amu Darya is the main source of irrigation for a number of countries in the region. The expected 15% reduction in flow of the Amu Darya by 2030 will have dramatic impacts on agriculture and food production in Turkmenistan. Other river flow rates are expected to decline at even faster rates (up to 30% reduction). At present, agriculture consumes 92% of all surface waters available in the country (2% - communal and 6% - industry).

B. Project Concept Background

44. The project appears to have had two main wellsprings bringing it into existence. On the one hand was a sustainable land management project funded from the Global Environment Facility and the German Agency for International Cooperation, GIZ. This medium-sized project (MSP) project, "Capacity building and on-the-ground investments for sustainable land management"[8] ("SLM project"), ran from 2007 to 2010, and also had the Ministry of Nature Protection as the national executing partner. As indicated in the AF project document, the SLM project "has been used as the basis for consultation in development of the current proposal, including the selection of potential sites (the mountainous area of Kopet Dag; the sandy desert region of Karakum and the area of intensive irrigated agriculture of Mary), community consultation, and assessment of agricultural and water requirements.

45. In addition to the significant influence of the SLM project, there had been a number of previous projects and initiatives in Turkmenistan the established the foundation for the AF project. These projects are comprehensively listed in Annex 3 of the project document, and include, for example, a project funded through the US Agency for International Development (USAID) from 2005-2007 that piloted Water User Associations in Turkmenistan.

46. At the same time, around 2010, UNDP and the Government of Turkmenistan sought to utilize resources from the newly established Adaptation Fund to respond to climate risks in Turkmenistan's agricultural system, with negative climate impacts becoming more evident from one year to the next. According to the project document, "*This project has emerged as a result of findings outlined in Turkmenistan's Second National Communication and the I&FF assessments undertaken by UNDP with the Ministry of Natural Resources and the Turkmenistan UNFCCC focal point. The scope of this project was conceived by the Ministry of Environment in consultation with national experts and key personnel of the Ministry of Water Economy and other organizations."*

47. These two related influences culminated in the current project. The full project document was developed in late 2010 and early 2011.

C. Problems the Project Seeks to Address

48. As outlined in the project document, there are multiple potential climate risks that the project is seeking to address. Water scarcity for agriculture is a primary factor, resulting from and in conjunction with increased temperatures:

[8] GEF ID #3239, which was part of the "Central Asian Countries Initiative for Land Management (CACILM) program.

> *"Water shortages and periods of drought are common, a situation which is likely to be exacerbated by climate change with consequences for development, economic growth and livelihoods. Almost half of the population is employed in the agriculture sector, and approximately 55% reside in rural areas. Climate observations show that the air temperature is steadily increasing in Turkmenistan as in the whole of Central Asia. Precipitation will become more variable, with increased frequency and intensity of drought and flood spells. Glacial retreat in Pamir-Altai will have significant impacts on water flows of the Amu Darya River. As a result, significant decreases in water supply and agricultural production are expected."*

49. The project document further summarizes the expected climate change effects in Turkmenistan:

- An increase in average annual temperature of between 4.2 and 6.1°C by 2050, which will include an increase in the number of extremely hot days (i.e. days over 40°C);
- A reduction in annual average rainfall of between 15 and 56% by 2050;
- An increase in average regional evaporation rates of 48% by 2050;
- An increase in the frequency and intensity of drought and flood spells;
- A 15% reduction in flow rates for the Amu Darya; and
- A 30% reduction in flow rates for other river systems.

50. Two further underlying causes of vulnerability are identified: i.) Deteriorating irrigation infrastructure and subsidized water prices; and ii.) Allocation of water resources to irrigate intensive cash crops due to historical reasons related to the Soviet period.

D. Project Description and Strategy

51. The total AF contribution to the project budget is $2,700,000 USD. With a project cycle management fee of $229,500 to UNDP, the total cost to the AF is $2,929,500 USD. The project was planned to be implemented over 60 months (five years). The project did not have a planned co-financing contribution from any of the project partners.

52. As stated in the Project Document, the project objective is "*to strengthen water management practices at both local and national levels in response to climate change-induced water scarcity risks that are increasingly affecting farming systems in Turkmenistan."*

53. The objective is to be achieved through three outcomes consisting of nine total outputs:

- **Outcome 1: Institutional capacity to develop climate resilient water policies in agriculture strengthened**
  - Output 1.1. Socio-economic impact of climate change on water availability costed and documented, including cost-benefit analysis of adaptation measures
  - Output 1.2. A package of modifications in the water code, with particular focus on communal water management; and financial incentives for water efficiency (e.g. differentiated and progressive tariff) developed
- **Outcome 2: Resilience to climate change enhanced in targeted communities through the introduction of community-based adaptation approaches**
  - Output 2.1: At least 4,000 agri-pastoralists of the Nohur mountainous region develop and implement water harvesting and saving techniques (such as slope terracing, small

rainwater collection dams, contour and stone bunds, planting pits, tillage, mulching) to improve soil moisture levels

- Output 2.2: At least 8,000 farmers implement community-based well and watering point management measures, including sand fixation and introduction of drought resistant traditional grain varieties in the Karakum desert region
- Output 2.3. At least 20,000 farmers in the Sakarchaga area benefit from improved irrigation services through the introduction of canal level, localized management practice

- **Outcome 3: Community-managed water delivery services introduced to benefit over 30,000 farmer and pastoralist communities in the three target agro-ecological zones**
  - Output 3.1: Mandates and institutional functions of local associations strengthened to improve local water services that are more resilient to increasing water stress and benefit at least 30,000 farmers and pastoralists
  - Output 3.2: Based on VCA assessments, community-based adaptation plans with particular focus on water delivery services designed and implemented through the government's social development programmes with direct engagement of at least 30,000 farmers and pastoralists
  - Output 3.3: At least 6 projects funded up to a total of $400,000 through WUAs and associated community groups
  - Output 3.4: Lessons learned on community-based adaptation options under various agro-climatic conditions of Turkmenistan disseminated through ALM and other networks

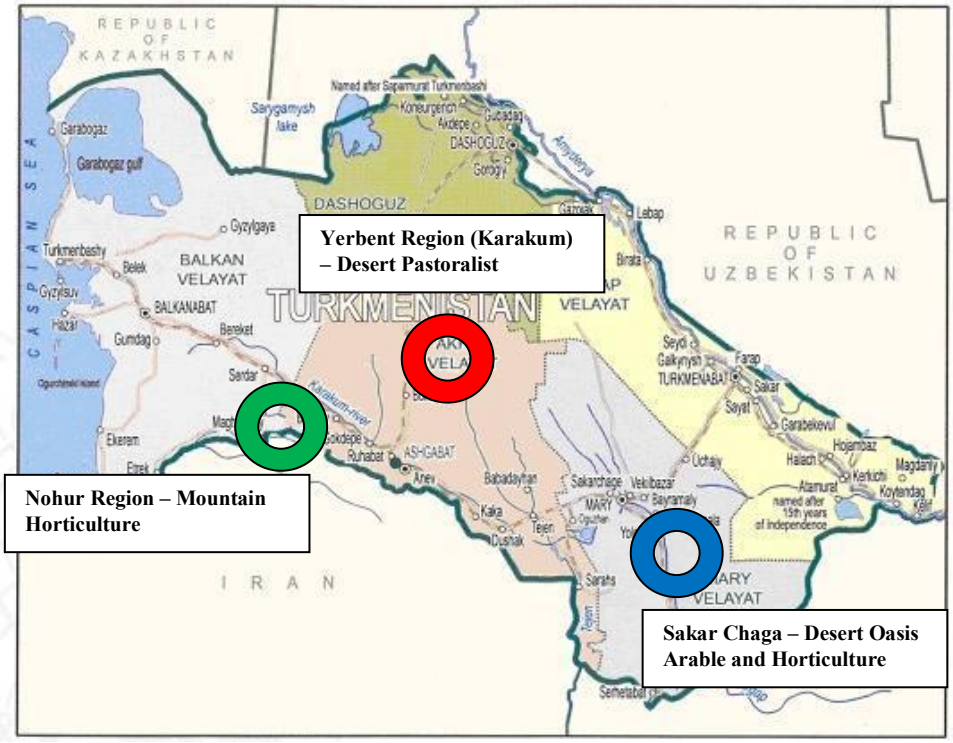
54. The expected project results are to some extent specified in the language of the project outputs, but the full project results are outlined in the project results framework, included as Annex 7 to this mid-term evaluation report.

55. The project field-level activities are carried out in three pilot locations: Nohur, Karakum, and Sakarchaga. The main characteristics of these sites are summarized in Table 2 below. The location of the pilot sites is identified in Figure 1 below.

Table 2 AF Project Pilot Location Key Characteristics

	Nohur	**Karakum**	**Sakarchaga**
Ecotype	Mountainous	Desert	Oasis
Agriculture type	Arid mountain pasture animal husbandry of cows, sheep, and goats; irrigated vegetable and fruit cropping	Desert pastoralism of camels, cows, sheep and goats	Irrigated production primarily of cotton and wheat
Area	9,000 ha	842,000 ha	53,000 ha
Population	12,000	8,000	132,000
Location in country	Southwest (Central Kopetdag Mountains)	Central (Karakum Desert)	Southeast (Mary Velayat Oasis)
Land tenure type	Private communal agriculture plot	Pasture leaseholder	Agriculture field leaseholder (average ~5 ha per family)

Figure 1 Location of AF Project Pilot Regions in Turkmenistan



E. Implementation Approach

56. UNDP serves as the Multilateral Implementing Entity (MIE) for the AF project, with the Ministry of Nature Protection as the national executing partner. The project office sits in the MNP offices, and consists primarily of the project manager, a project assistant, and a community-outreach training expert. The National Project Director is a high-level official within the MNP, currently the interim director of the Institute of Desert Flora and Fauna, who formerly served in the position of director for international cooperation for the MNP.

57. The project team further consists of a national technical coordinator, and an international chief technical advisor (ICTA). In addition, the project draws regularly on the services of a team of three national experts, covering the subjects of sustainable land management in the context of climate change, legal matters, and socio-economic matters. The project has also contracted on a short-term basis three international experts (in addition to the ICTA), on legal matters, irrigation systems, and socio-economic aspects.

58. At the project pilot sites the project has contracted a local coordinator for each site, with additional support services from a local nursery manager. In addition, informal local steering committees, formed through the

59. For administrative, financial management, procurement, and other related services the project team relies on the “Project Implementation Unit” in the UNDP Country Office; the PIU is set-up to provide these services to multiple UNDP projects.

60. The main oversight mechanism is the Project Board, which meets once per year to review and approve the annual project workplan and budget. The Project Board also serves as a

collaboration and coordination mechanism, bringing together the key stakeholder institutions. The project board consists of the following member institutions:

- Department of International Cooperation, Ministry of Nature Protection
- Ministry of Water Economy
- Ministry of Agriculture
- Committee on Nature Protection of the Meijis (Parliament of Turkmenistan)
- International Department of the National Committee on Hydrometeorology under the Cabinet of Ministers of Turkmenistan
- The journal "Ecological culture and environmental protection"
- Representatives of the local self governance unit for each of the three project pilot regions
- UNDP

F. Project Timeline and Key Milestone Dates

61. Table 3 below shows the project timeline and key milestone dates, as originally expected and in actuality. It is not clear when the project concept was first formally codified and project development started, but it was approximately by mid-2010. The project document indicates that from September 19-25, 2010 UNDP and the Ministry of Environment undertook formal consultations with "key stakeholder ministries". Thus the project development period was roughly one year, ending with country endorsement of the project document for submission to the AF on April 25, 2011. Project approval took place approximately six months later, with AF board approval in November 2011. Project start-up would then have been expected in approximately January 2012, and according to the project document M&E plan the inception workshop was targeted for being within two months of project approval. The national project inception workshop did not take place until May 22, 2012, (an approximate delay of three months) followed by local inception workshops in July 2012.

62. Although the project inception workshops were held, project activities could not substantively start due to a delay in registration as a foreign-financed project by the Ministry of Economy, which did not occur until April 2013. According to the 2014 PPR, this was partially tied to bureaucratic issues with the Government of Turkmenistan: *"The project tried to address this directly with the Ministry of Economy, responsible for registration of international projects. However, in January 2013 a new Presidential Decree regarding state accounting of foreign financed projects/programmes was issued and based on this Decree, the Ministry of Economy was to develop new procedures for registration. When it became clear that the process of developing new procedures was going to take some time, the project involved Senior Management of UNDP and organized high level meetings with the government."*

63. Once the project received official registration and the second project manager was on board, in April 2013, the project began making good implementation progress. The project has had a solid period of approximately 18 months of activities up to the point of the mid-term evaluation in October 2014.

Table 3 Project Timeline and Milestones[9]

Milestone	Expected date [A]	Actual date [B]	Months (total)
1. Country Endorsement for the Project Proposal	Not applicable	April 25, 2011	
2. AF Board Approval	Not specified	November 3, 2011	6 (6)
3. IE-AFB Agreement Signature	Not specified	December 8, 2011	1 (7)
4. Project Start	June 2011	May 2012	5 (12)
5. National Inception Workshop	February 2012	May 22, 2012	0 (12)
6. Nohur Local Inception Workshop	Not specified	July 13, 2012	1.5 (13.5)
7. Karakum Local Inception Workshop	Not specified	July 18, 2012	0 (13.5)
8. Sakarchaga Local Inception Workshop	Not specified	July 21, 2012	0 (13.5)
9. First Project Manager Hired	January 2012	August 2012	1 (14.5)
10. First Project Manager Departure	Not applicable	December 2012	4 (18.5)
11. Registration as a foreign financed project by the Ministry of Economy in the Government of Turkmenistan	December 2011	April 2013	4 (22.5)
12. Second Project Manager Hired	Not applicable	April 2013	0 (22.5)
13. International Chief Technical Advisor Contracted	Not applicable	May 2013	1 (23.5)
14. Mid-term Evaluation	June 2013	October 2014	17 (40.5)
15. Project Operational Completion	June 2016	Not applicable	
16. Terminal Evaluation	September 2016	Not applicable	
17. Project Financial Closing	December 31, 2016	Not specified	

G. Key Stakeholders

64. The organizations identified in Table 4 below represent the main key stakeholders participating in the Turkmenistan AF project. As later discussed in Section VI.B, there are a few additional partners that are also relevant to the project activities.

Table 4 Turkmenistan AF Project Key Stakeholders

Stakeholders	Roles/Responsibilities
Ministry of Nature Protection	Environment, Nature Protection, Climate Monitoring
Ministry of Agriculture	Land Use Planning, Distribution and Management of Arable Lands
Ministry of Water Economy	Distribution and Management of Water Resources, Management and Development of Irrigation Infrastructure
Ministry of Economy	Economic Planning

[9] Source: 1.A. Not applicable; 1.B. Endorsement letter attached as annex to project document. 2.A. Not specified; 2.B. 2014 PPR. 3.A. Not specified; 3.B. 2014 PPR. 4.A. Project document milestones; 4.B. Date of inception workshop. 5.A. Expected within two months of project start-up, according to project document M&E plan; 5.B. Inception report. 6.A. Not specified; 6.B. Inception report. 7.A. Not specified; 7.B. Inception report. 8.A. Not specified; 8.B. Inception report. 9.A. Expected at planned project start-up, a month after approval; 9.B. 2013 PPR. 10.A. Not applicable; 10.B. 2014 PPR. 11.A. Assumed that government registration would be expected as soon as the project was approved, considering the previous government endorsement for the project; 11.B. 2014 PPR. 12.A. Not applicable. 12.B. 2013 PPR. 13.A. Not applicable; 13.B. 2013 PPR. 14.A. Project document milestones; 14.B. Date of MTE evaluation mission. 15.A. Project document milestones; 15.B. Not applicable. 16.A. Project document milestones; 16.B. Not applicable. 17.A. As per standard UNDP procedures, based on an operational closing date of June 2016; 17.B. Not specified.

Research Institute of Water Management	Research on water quality and quantity issues
Institute of Desert, Flora, and Fauna	Conservation and sustainable use of desert ecosystems and their resources
Institute for Strategic Planning and Development	Socio-economic analysis; economic development trend and forecasting
Local Authorities	Local planning and administrative decision-making
Local Communities	Use of resources

EVALUATION FINDINGS AND CONCLUSIONS

IV. Relevance

A. Relevance of the Project Objective

i. Relevance to National and Local Policies and Strategic Priorities

65. At the national level the Turkmenistan AF project supports multiple national policies, strategies, and priorities related to climate change adaptation, agriculture, and water resources management. As discussed in the project document, the project was in line with and supportive of the existing Turkmenistan Water Code, which defines in detail the functions of the Cabinet of Ministers in relation to water resource management and conservation. Within the expected national process of revision of the existing Water Code, the Turkmenistan AF project is seeking to elaborate more detailed implementation strategies to achieve the stated aim of improved water efficiency and associated increases in agricultural outputs. This was identified as an area of opportunity and priority during the project development process. The project also supports The national program "Strategy of Economic, Political, and Cultural Development of Turkmenistan Until 2020," which sets out targets in relation to agricultural outputs and envisages an increase in agricultural production of more than 15 times using only the current natural resources, and accelerated industrial potential.

66. Further, in Turkmenistan's Second National Communication to the UNFCCC, the water sector was identified as the most critical priority for climate change adaptation. The second NC identified the following water management priorities for addressing climate change adaptation:

- Transition to integrated water management;
- Optimization of agricultural production arrangements to provide necessary agricultural production, and minimization of water resource use;
- Measures to increase efficiency of irrigation systems;
- Innovation of advanced irrigation techniques (drop, micro-spray), and enhancement of existing irrigation techniques (traditional); and
- Construction of additional water reservoirs.

67. At the local level the project is also clearly relevant to local priorities in the three pilot regions. For example, in Nohur, the project's work to build dams and enhance irrigation systems was noted by local stakeholders as highly important and beneficial for the local community to enhance its resilience to climate change. Similarly, in the Karakum region, the local resource users and community members are highly appreciative of the project's contributions and investments in wells, sardobs, and other water management infrastructure. The value and relevance of these activities is indicated by the in-kind co-financing that the communities themselves have contributed to completing the project activities; n total communities have contributed $346,000 in cash and in-kind co-financing, which represents a significant contribution of labor, time and some cash co-financing for these communities of relatively modest means (co-financing is further discussed in Section VI.F).

ii. Relevance to UNDP Country Priorities

68. The Turkmenistan AF project is directly relevant to and supportive of the UN Development Assistance Framework for Turkmenistan for 2010-2015. The project is supportive of "Outcome 3.3: National Development planners integrate adaptation and preparedness of economic development sectors to climate change into development plans and management." It specifically supports Output 3.3.3 "National stakeholders and local communities apply best practices on sustainable land and forest resources management, taking into account the global climate change context," and Output 3.3.4 "National authorities develop and launch integrated water resource management at national and local levels."

69. Under the UNDP-Turkmenistan Country Program Action Plan for 2010-2015 the project supports Outcome 3.2 to support the environmentally sustainable use of natural resources, and Outcome 3.3 to assist the country to adapt the key sectors of its economy to climate change. Relating to these outcomes, the project contributes to results of the following indicators from the CPAP results framework:

- Number of laws revised to align national legislation with international standards;
- Number of sectoral plans/strategies revised to integrate respective environmental priorities and concerns, and incorporate strategic adaptation measures;
- Number of laws and policies revised and aligned internationally for better water governance; and
- Number of pilot areas practice integrated water resource management.

iii. Relevance to Adaptation Fund Strategic Objectives

70. The Adaptation Fund has produced a Strategic Results Framework,[10] identifying the AF goal, impact, and seven expected outcomes, with associated outputs. The Turkmenistan AF project supports multiple AF Results Framework outcomes and outputs, as well as the overall goal and impact. The key relevant outcomes and outputs are summarized in Table 5 below.

Table 5 Relevant Adaptation Fund Results Framework Outcomes and Outputs

Outcomes	Outcome Indicators	Outputs	Output Indicators	Relevant Project Activities
Overall Goal: Assist developing country Parties to the Kyoto Protocol that are particularly vulnerable to the adverse effects of climate change in meeting the costs of concrete adaptation projects and programmes in order to implement climate resilient measures.				All project activities.
Impact: Increase resiliency at the community, national, and regional levels to climate variability and change				
Outcome 2: Strengthened institutional capacity to reduce risks associated with climate-induced	2.2. Number of people with reduced risk to extreme weather events	Output 2.2: Targeted population groups covered by adequate risk	2.2.1. Percentage of population covered by adequate risk-reduction systems 2.2.2. No. of people affected by climate variability	The project's work on community training related climate change adaptation, and the work with the Ministry of Water Economy support these targets.

[10] See https://www.adaptation-fund.org/document/results-framework-and-baseline-guidance-project-level

Outcomes	Outcome Indicators	Outputs	Output Indicators	Relevant Project Activities
socioeconomic and environmental losses		reduction systems		
Outcome 3: Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level	3.1. Percentage of targeted population aware of predicted adverse impacts of climate change, and of appropriate responses 3.2. Modification in behavior of targeted population	Output 3: Targeted population groups participating in adaptation and risk reduction awareness activities	3.1.1 No. and type of risk reduction actions or strategies introduced at local level 3.1.2 No. of news outlets in the local press and media that have covered the topic	The project is working to specifically develop community-based adaptation priority plans. Some of the identified priorities will be funded under the project, and others are intended to be integrated into government investment plans. The project is also doing a lot of work to produce media materials and press releases to promote the issue of climate change adaptation in the media.
Outcome 6: Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas	6.1. Percentage of households and communities having more secure (increased) access to livelihood assets 6.2 Percentage of targeted population with sustained climate-resilient livelihoods	Output 6: Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability	6.1.1.No. and type of adaptation assets (physical as well as knowledge) created in support of individual- or community-livelihood strategies 6.1.2. Type of income sources for households generated under climate change scenario	The project is directly investing in improved irrigation systems as demonstration activities at the local level. The project is also providing training on various community-based management approaches to support efficient water use, including the implementation of the Water User Associations. The project's work also directly contributes to more climate-resilient income sources for local communities targeted under the project.
Outcome 7: Improved policies and regulations that promote and enforce resilience measures	7. Climate change priorities are integrated into national development strategy	Output 7: Improved integration of climate-resilience strategies into country development plans	7.1. No., type, and sector of policies introduced or adjusted to address climate change risks 7.2. No. or targeted development strategies with incorporated climate change priorities enforced	The project's work to provide inputs to the Water Code, Daihan Association Law, and related water management regulations contribute specifically to these indicators.

iv. Relevance to the UNFCCC

71. The Turkmenistan AF project is relevant to the UNFCCC, and in particular to the Cancun Adaptation Framework (CAF), [11] under the UNFCCC. The project represents support for Turkmenistan to implement adaptation priorities identified in its Second National Communication, and address loss and damage associated with climate change impacts – including loss of access to water resources. The project supports the third cluster of the CAF, "Institutions", by contributing to the strengthening of national institutions related to water management in Turkmenistan. The project supports the fourth cluster of "Principles" as it is in-line with the four main principles identified in the CAF (albeit, some more strongly than others):

- Be undertaken in accordance with the Convention;
- Follow a country-driven, gender-sensitive, participatory and fully transparent approach, taking into consideration vulnerable groups, communities and ecosystems;
- Be based on and guided by the best available science and, as appropriate, traditional and indigenous knowledge;
- Be undertaken with a view to integrating adaptation into relevant social, economic and environmental policies and actions.

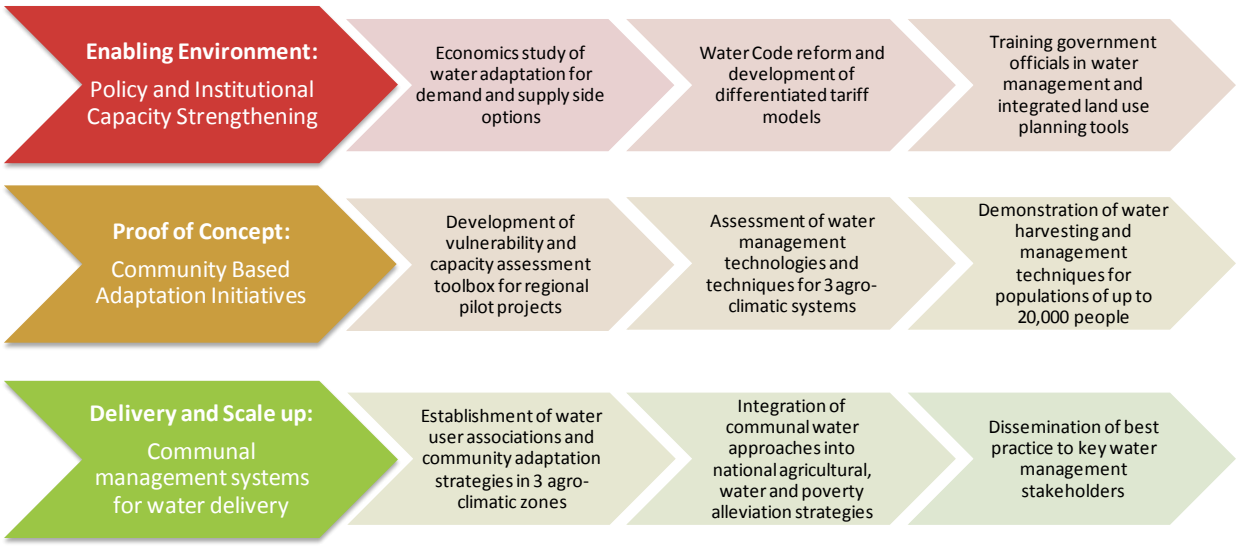
72. Finally, the project is also supportive of the fifth cluster, stakeholder engagement.

B. Relevance of the Project Approach: Project Strategy and Design

73. On the whole the project design and strategy is logical, pairing the intervention at national level addressing the policy context, with field level demonstration activities. The project document includes the helpful Figure 2 shown below (although this figure does not fully constitute a results-chain indicating the clear linkage of the project's design with the intended outcomes and impacts). However the selection of pilot sites appears to have been more opportunistic (based on previous work in the areas), rather than based on a clear assessment of specific strategic criteria.

[11] See http://unfccc.int/adaptation/items/5852.php.

Figure 2 Rationale for Turkmenistan Water Adaptation Program[12]



74. The evaluation finds there to be some risk of maladaptation in the project design. By supporting the construction of new and expanded water infrastructure (particularly in Karakum, but in the other pilot regions as well to some extent), the project is implicitly encouraging the expansion of water-dependent livelihoods, which may be further negatively impacted if water availability is reduced due to climate change. This is partly related to the overall Turkmenistan national policies of expansion in the agriculture sector (which the project is supporting), but as an Adaptation Fund project, the project needs to ensure it is not supporting national policies in ways that could contribute to maladaptation.

75. The project design rightly includes an element related to addressing inadequate and perverse pricing mechanisms related to water management. This is a critical issue if water management in Turkmenistan is to become more efficient in the long run, which is necessary for Turkmenistan to maximize agricultural production from its limited water resources. However, this evaluation finds there is a need to more comprehensively address pricing incentives and mechanisms for water usage; there appears to be a risk that the project will end up supporting development of a pricing approach that does not fully take into account the inflexibility of farmer decision-making related to water usage in areas where leaseholders are accountable for delivering centralized state orders for production, and they may not have the ability to significantly modify their water management and usage. This would potentially shift unsustainable pricing burdens to certain segments of the farming population, which would lead to a failed pricing system.

[12] Source: Project document Figure 1, p. 8.

V. Preparation and Readiness

A. Preparation and Readiness for Implementation

76. The Turkmenistan farming systems project passed through the project development phase relatively quickly, going from the first stages of development to approval by the Adaptation Fund Board in less than 18 months. This may have contributed to the apparent lack of readiness to start implementation immediately upon approval (as indicated by the long time from Adaptation Fund approval to the ramp up of substantive project activities, as discussed previously in Section III.F), although this may partly have been due to the fact that this was the first Adaptation Fund project in Turkmenistan, and one of the few donor-funded development assistance projects in the country. However, it is standard practice for Adaptation Fund projects and UNDP projects to be able to start implementation within a few months of final approval, even in many countries with challenging contexts (an inherent hallmark of developing countries). One lesson from the experience of the Turkmenistan farming systems project is that UNDP and government partners need to prepare prior to final project approval for immediate ramp-up of human resources and any necessary formal agreements or arrangements (such as registration of the project as a foreign assistance project).

B. Risk Assessment in Project Development

77. Section III.B of the project document includes the project risk assessment. The risk analysis identifies only four risks, two of which are rated as low, and two of which are rated as medium. This is considered a minimum level of risk assessment for a project of this size that involves challenging technical and socio-economic issues. For example, the risk assessment table does not identify any specific risks related to the implementation of the WUA approach, and the only risk related to national policy revision relates to the introduction of progressive tariffs. In addition, the risk management measures are not adequately detailed and comprehensive. For example, one risk management component states that the project "includes elements which are considered realistic within given timescales"; the design of the project cannot by definition be a risk management measure for a risk identified for the project – if the design of the project addresses the risk, then the risk should not be identified as a risk for the project.

78. Another indication of inadequate risk assessment at the project design phase is the fact that the project inception report includes an updated risk assessment table, with nine risks identified, more than double the number identified in the project design. The current risk monitoring section of the annual Project Performance Report includes 11 identified risks.

C. Stakeholder Participation in Development

79. Section II.H of the project document, "*Consultative process, including the list of stakeholders consulted, during project preparation,*" [13] specifically outlines the stakeholder consultation process undertaken during the project development phase. However, the project document discuss the consultation process and extent of input from the targeted pilot communities, indicating only that, "As part of proposal development, the views and requirements of the communities that are to participate in the AF project in Nohur, Karakum and

[13] P. 35 of the project document.

Mary Oasis were solicited and included as the basis for proposed measures and activities. Local farmers, authorities and village community leaders have helped to frame the project structure," and also indicates the specific settlements where farmers were consulted, further indicating that in Sakarchaga "approximately 300 farmers" were consulted. Although the project document is not fully explicit in this regard, based on the data collected during the mid-term evaluation it appears that stakeholder consultation in the project development phase was adequate.

VI. Efficiency

80. The Turkmenistan farming systems project **efficiency** is rated *moderately satisfactory*. Due to problems with project start-up following approval, the project is approximately 12-15 months behind the originally planned schedule. The delay has not had significant negative effects on the project's ability to achieve its expected outcomes, because the on-the ground activities are rapidly being brought up to speed, and the foreseen water code revision was also delayed by the government, so the project's contribution is still timely. The total project disbursement rate, at 35.3%, is lower than it should be at this stage of the project's life – officially 55% complete in terms of time. However, since April 2013 the monthly disbursement rate has increased six-fold: from an average of 0.3% of the project budget per month during the first 16 months, to an average of 1.7% per month during the past 18 months. While annual delivery of the planned budget is rising, it is still low, at 44.9% for 2014 as of late September. At the same time, project management costs have not outpaced project activity spending, and at 11.1% of current total expenditure, are roughly in line with the planned project management expenditure of 9.3%. The project has also applied good adaptive management, and has secured $346,000 in co-financing, when zero co-financing was originally foreseen. The project management arrangements are working well, and the project has applied an appropriate partnership approach.

A. Implementation and Execution Quality and Progress

81. The project key dates were previously indicated in Section III.F of this report. Based on the approval date of November 2011, the project would have been expected to begin substantive activities in the 1st quarter of 2012. The project had a planned 60 month implementation period, and thus the actual expected mid-point of the project can be considered as June 2014. However, with substantive activities not beginning until the 2nd quarter of 2013 (the project had disbursed just over 5% of the budget by May 2013), the project implementation may be considered as approximately 12-15 months delayed.

82. The delay in project workplan execution has not had a significant negative impact on potential project results. This is primarily because the Water Code revision that had been expected earlier is now not expected until 2015. Therefore the project inputs to the revision process – proposed amendments and secondary legislation supporting the legal basis for Water User Associations, etc. – are still timely.

83. The project has faced a variety of implementation and execution challenges, including:

- Inability to receive registration as a foreign assistance project until April 2013, which made it impossible to open a project bank account and avoid tax implications;
- Initial difficulty in finding qualified project staff;
- Turnover in project staff, with the first project manager leaving in December 2012;

- New project manager not in place until April 2013;
- Delays in approval of the 2014 workplan, due to changes in position of Ministry of Nature Protection counterpart staff (i.e. NPD, and others);
- Turnover in other government institution partner staff; and
- Various procurement difficulties related finding qualified and able vendors within planned budget lines to complete some of the field-based demonstration activities.

i. UNDP Oversight and Implementation Support

84. On the whole UNDP has been strongly supportive of the project, has helped negotiate implementation issues, and has worked to solve issues that have arisen. One example is the additional efforts the UNDP Country Office undertook to address the project registration issue when it became clear that a solution was not imminent – in January 2012 UNDP sought meetings with the relevant government bodies, and the issue was resolved by April 2013. In addition UNDP has supported the project to ensure good project workplanning, comprehensive reporting, and project outreach through the UNDP website. The model in the UNDP Turkmenistan Country Office of having a "project implementation unit" which provides administrative and financial support to multiple projects appears to be a strong model for efficient project management. UNDP has also clearly supported project adaptive management, and has worked through the necessary project budget revisions.

85. As with any development assistance project in any country, as the project implementing agency UNDP shares in the responsibility for both the project successes and results achieved, and the implementation challenges faced. This includes the start-up issues indicated above, and the project's low financial disbursement rate to date. Theoretically with good planning and foresight the project start-up issues could have been minimized or avoided altogether. One factor that may have contributed to the long timeframe for the project to get started was that there was turnover in among the environment staff at the UNDP country office in the time after project approval. There has recently been turnover in the position of UNDP Regional Technical Advisor (RTA) for the project, which also presents some potential future risk to project implementation, since the previous RTA played a strongly supportive role for the project; however, there appears to have been an adequate handover process to the new RTA.

86. Following project start-up there have also been some implementation issues. Notably, due to miscommunication or insufficient communication, in 2014 the project significantly over-budgeted for Outcome 2 relative to the available resources, and this could not be easily rectified because the inaccurate budget information had been presented to national stakeholders, leading to raised expectations for results. However, UNDP, in consultation with the project stakeholders, identified budget planning measures to ultimately resolve the issue.

ii. Country Ownership and Execution Support

87. The Department for Coordination of International Programs and Projects at the Ministry of Nature Protection of Turkmenistan is the official government executing partner. Based on data collected during the mid-term evaluation, the project appears to benefit from a good level of country ownership at the national and local levels. For example, the relevant body of the national

parliament is represented on the project Steering Committee (and has actually participated), and provided input on the project for the mid-term evaluation.

88. There have been some minor challenges with project execution, including the initial delays with registration of the project as a foreign assistance project. In addition, the National Project Coordinator changed positions in early 2014, which caused some delays in approval of the 2014 project annual workplan (which was not formally approved until May 2014). On the positive side the Government of Turkmenistan retained the same individual as National Project Coordinator in his new position, but unfortunately there were some bureaucratic delays with the transfer of formal signature authority related to the project.

89. Since the current project management team has been in place, the project has made significant progress in executing the project workplan, and there appears to be good attention to key project management metrics, such as timeliness of delivery. In addition, the project has drawn on a core of national experts that have formed what may be truly considered a "team." There have, however, been some lessons related to project staffing (i.e. higher staff levels than originally planned) and budgeting (see discussion in previous section), which are continuing to be addressed and improved.

B. Partnership Approach

90. The Turkmenistan farming systems project has had a strong partnership approach. One of the project highlights has been the collaboration with another UNDP project in Turkmenistan, the Climate Risk Management (CRM) project. This is actually the national component of a regional project funded by the UNDP Bureau for Crises Prevention and Recovery. The projects share related objectives, and work with similar sets of stakeholders. The two projects have generated synergies and efficiencies by sharing national technical experts, and by leveraging each other's resources in the three project pilot regions. For example publications relating to the objectives of both projects have been jointly funded, and the projects have organized joint workshops. The CRM project has invested in activities directly supportive of the AF project, such as laser land-leveling, and the equipment procured for CRM project activities will be subsequently used under the AF project.

91. Other AF project partnerships include cooperation with the Ministry of Water Resources for the reconstruction of the discharge drainage, financed by the state budget, and cooperation with the "Zakhmet" Farmers' Association to introduce modern irrigation methods for winter wheat in 300 hectares, financed by the association.

92. Based on data collected during the mid-term evaluation, it appears that there may be opportunities for additional partnerships with the agriculture research institute, which has a demonstration agricultural plot near Ashgabat, which can be used to more easily show decision-makers the value and necessity of efficient irrigation systems.

C. Adaptive Management and Results-based Management

93. The project has undertaken a number of adaptive management measures to support results-based management, mainly related to project budget revisions following the initial slow project start-up and low financial delivery in 2012 and the first half of 2013. At the project inception phase no specific notable changes were made to the planned project activities. The

only changes documented in the inception report relate to the revision of the wording for the outputs that specified a targeted number of beneficiaries to switch to percentages of the targeted population in each of the pilot areas, rather than absolute figures. For example, for Output 2.2 for activities in Karakum pilot region, it was proposed to change the output wording from 8,000 persons to 50% of the targeted population (however these changes do not appear to have been implemented in the project indicators table in the annual PPR template).

94. One notable adaptive management measure is the approach the project has had to take toward implementing the Water User Association approach in the three pilot regions. Local farm systems in Turkmenistan are managed by farmers' associations, or "Daihans". The project wanted to avoid setting up a new civil society or community-based organization that would overlap with Daihan associations, so the project is working to develop the capacity of Daihan associations to operate as Water User Associations as well, including proposing modifications to the relevant national legislation to allow transfer of water management to Daihans. Each Daihan is further divided into "brigades" of farmers, and the project is leveraging brigades as Water User Group sub-units of the Daihan/WUA.

95. Other various minor adjustments to project activities have been made during implementation, which has been done in a transparent and results-based manner. In some cases the project has actually be able to speed up project activities; for example, the project was able to construct eight small dams in the Nohur region in 2014 when only five where planned, with the additional three originally planned for 2015.

D. External Communications

96. External communications have been among the project management highlights. The project team have actively produced press releases related to project activities and achievements, and these have been posted on the UNDP Turkmenistan website (http://www.tm.undp.org/). In addition, the project has contributed content to the Adaptation Learning Mechanism website, UNDP's global climate change knowledge platform.

E. Financial Planning by Component and Delivery

97. Table 6 below shows the AF project financial planning by component, and also indicates disbursement to date. Outcome 1 of the project was planned for 13% of the project budget, Outcome 2 was planned for 48.1%, and Outcome 3 was planned for 29.6%. Project management was budgeted at 9.3% of the total budget. The project M&E budget represents 2.1% of the budget total, though this amount is drawn from the other components.

98. In terms of time, taking January 2012 as the official project starting point (given the final AF approval received in December 2011), as of September 30, 2014, the project can be considered 55.0% complete (33 months of total planned 60 months). However, taking May 2013 as the actual start date, given the government registration received in April 2013, the project is only 30.0% complete (18 of 60 months).[14]

[14] If the date of the inception workshop were considered the start of the project, it would be ~47% complete.

99. Total disbursement to date equals 35.3%[15] of the total AF amount. The shortcomings in the financial delivery appear to be primarily due to the approximately 15-month delay of the start of substantive activities, from January 2012 to April 2013. As previously discussed, there were multiple reasons for this, relating both to the performance of the implementing and executing agencies.

Table 6 Turkmenistan AF Project Disbursement by Component

	AF amount planned	% of AF total budget	AF amount actual	% of current total amount	% of originally planned
Outcome 1: Institutional capacity to develop climate resilient water policies in agriculture strengthened	$350,000	13.0%	$155,755	18.2%	44.5%
Outcome 2: Resilience to climate change enhanced in targeted communities through the introduction of community-based adaptation approaches	$1,300,000	48.1%	$471,784	55.1%	36.3%
Outcome 3: Community-managed water delivery services introduced to benefit over 30,000 farmer and pastoralist communities in the three target agro-ecological zones	$800,000	29.6%	$134,080	15.7%	16.8%
Monitoring and Evaluation*	$56,000	2.1%	N/S	N/S	N/S
Project Coordination and Management	$250,000	9.3%	$94,966	11.1%	38.0%
Total**	$2,700,000		$952,429	100.0%	35.3%

Sources: Project Document for planned amount; data provided by UNDP for actual AF amounts, current as of September 22, 2014 for total, September 18, 2014 for component amounts.
**The project document includes a detailed M&E budget, but M&E is not included as a stand-alone budget line in project budgets. According to the project document: "The M&E budget will be taken pro-rata from the three project component budgets, reflecting the size of the TA."*
*** Up to date data on the component breakdown of $95,845 was not yet available at the time of analysis, thus the actual disbursements for each component do not fully total the amount indicated as total.*

100. Figure 3 shows AF project planned, revised and actual disbursements by year, while Figure 4 shows project planned and actual disbursement by outcome. Outcome 1 is nearly half disbursed, Outcome 2 is more than 1/3rd disbursed, and Outcome 3 is approximately 1/6th disbursed. This declining balance makes some sense, as a time progress was expected among the three outcomes – Outcome 1 could begin immediately at the start of the project, Outcome 2 required some preparation to begin significant disbursements, and Outcome 3 required even more time and was to partially build on Outcome 2.

[15] The project has another almost $200,000, or more than 7% of the total budget, committed through 2014, though this still has to be disbursed following receipt of deliverables. If achieved in the next three months, this would bring the total disbursement to more than 42% by the end of 2014.

Figure 3 AF Project Planned, Revised and Actual Budget by Year *(through September 22, 2014)*

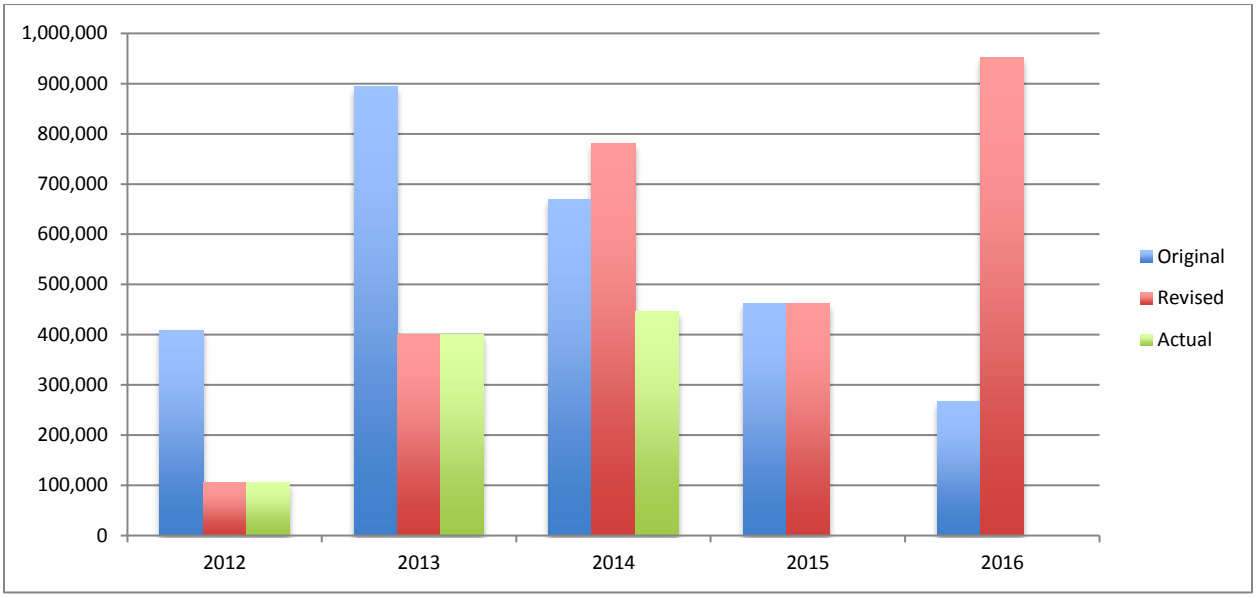
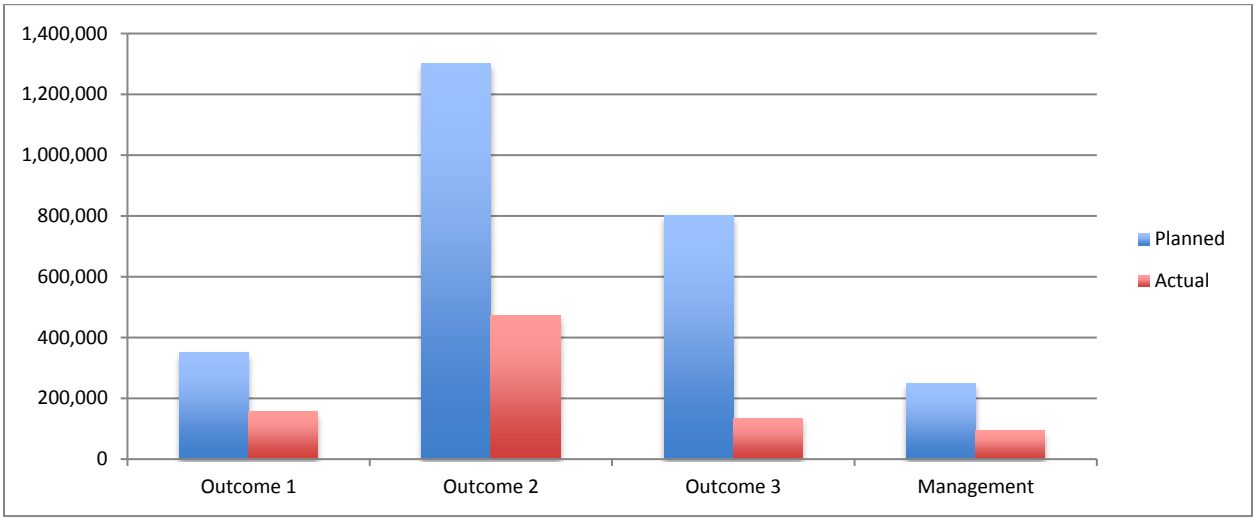


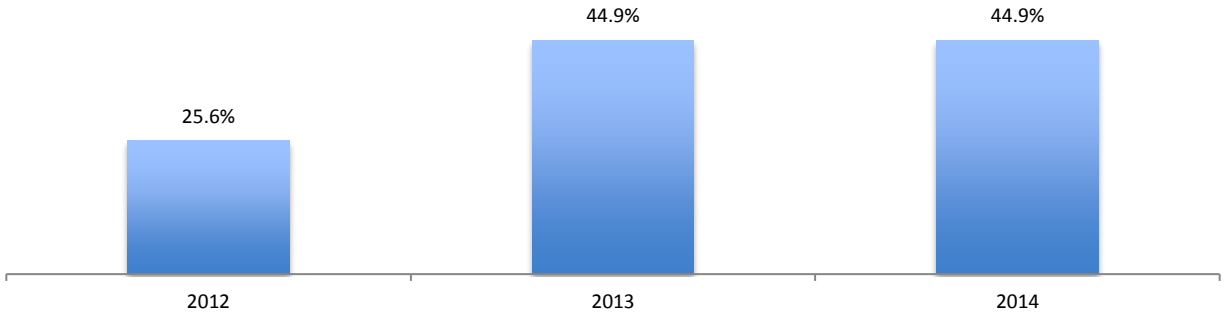
Figure 4 AF Project Planned and Actual Disbursements by Outcome *(through September 18, 2014)*



101. Given the fact that the project is more than halfway complete in terms of time, the 35.3% disbursement rate is not a strong state of affairs. However, there are some positive signs and trends, indicating significant improvement in delivery over the past 18 months, since the current project manager has been in place. Considering that only about 5% of the budget had been disbursed by May 2013, from May 2013 through September 2014 the project delivered about 30% of the project budget over about 30% of the project's life. In other words, the average monthly disbursement rate during the first 16 months of project implementation was 0.3% of the total budget per month, while during the past 18 months this has increased to an average of 1.7% per month.

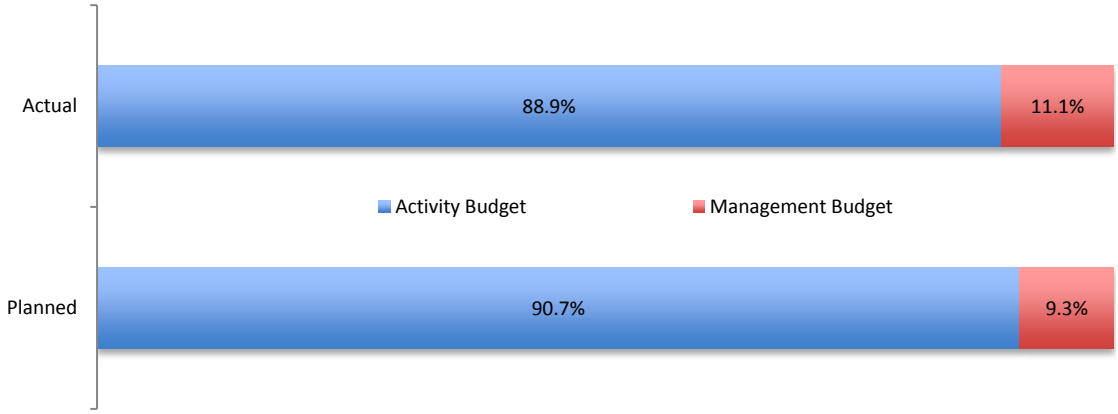
102. The annual delivery rate has also been rising: financial delivery for year 1 (2012) was 25.6% of the planned 1st year budget, delivery for 2013 was 44.9%, and delivery for 2014 also currently stands at 44.9%. Thus the project is set to surpass the 2013 delivery rate, but significant additional progress is required in the remainder of 2014 to reach anywhere near 100% for the year. Projects should aim to deliver at least 95% of the planned budget in any given year.

Figure 5 AF Project Annual Financial Delivery Rate *(2014 through September 22)*



103. Another positive sign is that project management costs currently stand at 11.1% of the total disbursed amount (Figure 6), which is well-within the range of the originally planned 9.3%. All projects must ensure that management costs do not outpace non-management costs during project implementation, and the Turkmenistan AF project appears to be within a reasonable band for this measure, though continued attention is necessary to keep management costs on target.

Figure 6 AF Project Management Budget as a Share of Total Project Budget



104. An audit of the project was conducted for 2012, by the international firm Ernst & Young. The audit identified a number of financial planning issues for correction. These were diverse, but related to issues such as budget planning, over-expenditure of budget lines, staff time recording, classification of expenditures, and payment of contract benefits. UNDP provided an appropriate management response to each of the items identified, indicating that some of the items were previously known, and steps were being taken to address them. In the view of this evaluation the items identified do not present fundamental or critical risks to the project, though they certainly

should be rectified. A second audit has not yet been conducted. This evaluation recommends that an audit be conducted for 2014, to confirm that the issues identified in the 2012 audit have been adequately addressed.

F. Co-financing

105. At approval the Turkmenistan AF project did not include any co-financing commitments by any of the involved entities – the Government of Turkmenistan, or other partners. As of the mid-point, the project has in-fact benefited from co-financing contributed from various corners. Notably and impressively, co-financing has come both from government and beneficiaries at the community level. This is a positive indication of stakeholder ownership. As documented in the 2014 PPR, $346,000 USD in co-financing had been contributed. The breakdown of this co-financing is indicated in Table 7 below. According to the project team, the in-kind co-financing provided by the communities has been calculated based on the number of person-days of labor required for the various on-the-ground construction investments (i.e. dams, wells, sardobs, storage basin construction, etc.), multiplied by the average daily wage in Turkmenistan.

Table 7 Actual Co-financing Committed in Support of the Project Objective

Co-financing Type	Co-financing Source	Amount at MTE	Explanation
AF MIE Agency	UNDP-funded project Climate Risk Management	$28,000	Implementation of adaptation measures in pilot regions (garden tools sets, laser leveler equipment with scrapper, pre-works before laser planning, soil-lab and trainings)
	Community in-kind co-financing		
Private Sector	- Nohur	$34,500	Labor
Private Sector	- Karakum	$111,920	Labor
Private Sector	- Sakarchaga	$31,580	Labor
National Government	Ministry of Water Economy	$140,000	Reconstruction and cleaning of the inter-farm drainage channel “South” (35 km in length) in Sakarchaga project region.
	Total	**$346,000**	

G. Project Monitoring and Evaluation

106. The project document outlines the project monitoring and evaluation plan, in section III.C. The planned monitoring and evaluation activities include the inception workshop and report, monthly and annual progress reports, annual meetings of the project coordination committee, independent external mid-term and final evaluations, and annual audits. The monitoring and evaluation plan is assessed as meeting UNDP and Adaptation Fund minimum standards, and contributes to good practice design for project monitoring and evaluation by explicitly stating responsible parties, budgets and timeframes for monitoring and evaluation activities.

107. A key element of project monitoring and evaluation design is the design of a project’s results framework indicators and targets, which should be designed to meet “SMART” criteria to the extent feasible. The Turkmenistan AF project’s results framework is generally well-designed, and the indicators and targets are generally in-line with SMART criteria. There are some

opportunities to strengthen the results framework (see comments in Annex 7 for the mid-term evaluation's assessment of project results indicator-by-indicator), but a comprehensive revision of the results framework is not considered necessary at this point.

108. The project's monitoring and evaluation activities have been implemented generally in line with the plan outlined in the project document. The Project Board has met at least once per year, and the project has generally complied with reporting requirements. The mid-term evaluation is being carried out at the approximate mid-point of the project (slightly after the originally planned mid-point for time, but prior to the mid-point for disbursement). However only one audit of the project has been conducted, though this was to be an annual exercise.

VII. Results and Effectiveness: Progress Toward Objectives and Outcomes

109. The project **results** thus far and overall progress toward the expected outcomes is considered ***satisfactory***. Following the initial slow project start-up, significant progress and results have been achieved in the 18 months leading up to the mid-term evaluation. The project has a total of 16 indicators, and the progress of project activities is such that achievement of 13 of the indicator targets is considered likely by the end of the project. For the remaining three indicators achievement is uncertain, but still possible. The project is making good progress on Outcome 1 and 2, while the eventual results under Outcome 3 are slightly less certain. Key results produced as of October 2014 include:

- Multiple expert policy recommendation documents provided to the government for considering in the anticipated upcoming revision of the Water Code, and development of associated regulations, as well as related legislation such as the Law on Daihan associations;
- Critical work on development of a proposal for a water tariff regime;
- Completion of multiple on-the-ground water infrastructure improvement projects across the three pilot regions, including:
  - Nohur: Construction of eight small-scale dams (three of which were only planned for 2015), along with multiple other small-scale investments related to use of natural springs, water storage facilities and drip irrigation;
  - Karakum: Construction and repair of 13 wells, and other traditional water access infrastructure (sardobs, takyrs, and kaks), as well as sand dune fixation of 10 hectares;
  - Sakarchaga: Implementation of five field-level water-regulating devices in irrigation canals, and significant progress toward implementation of an additional 13 structures by the end of 2014. In addition, there has been significant progress toward cleaning and repair of 31.5 km of irrigation canals.
- Completed community climate vulnerability assessment report for the three pilot regions;
- Numerous community-level capacity development activities related to establishing and operationalizing Water User Associations, including many training activities;
- Concrete positive results through partnerships with other relevant projects:
  - Synergies with the UNDP CRM project, which is addressing related issues, and has also supported implementation of adaptation measures in the three pilot regions;

- Cooperation with the Ministry of Water Resources for the reconstruction of the discharge drainage, financed by the state budget; and
- Cooperation with the "Zakhmet" Farmers' Association to introduce modern irrigation methods for winter wheat in 300 hectares, financed by the association.

110. The **effectiveness** of the project thus far is considered ***moderately satisfactory***; even if the project completes its planned activities, it is not fully clear to what extent the project will contribute to more climate-resilient water management. Government institutions and the overall agricultural and water management system (including pricing structures and mechanisms) have a significant influence on the ability of communities to efficiently manage their water resources. The effectiveness of the project will ultimately depend on A.) The extent to which the project influences legislation, policy, and regulation development; B.) The extent to which the lessons from field-level demonstration activities are documented and shared, and if these activities are scaled-up within and beyond the pilot regions; and C.) The extent to which the Water User Associations become functioning and self-sustaining entities that can actually influence water use and management practices. At this stage, these all remain open questions. There is also a risk of the project contributing to maladaptation: By increasing and extending irrigation infrastructure and water points the project could inadvertently incentivize the expansion of agricultural lands and livestock herds to a level that would again be on the margin of risk related to any future significant climate impacts, such as greatly reduced rainfall, or rainfall with higher seasonal variability. The project team and experts working on the project are conscious of this risk and are working to limit it.

A. Outcome 1: Institutional capacity to develop climate resilient water policies in agriculture strengthened

111. Output 1.1. Socio-economic impact of climate change on water availability costed and documented, including cost-benefit analysis of adaptation measures

112. A working group on socio-economic impacts of climate change on water availability was established, and cost-benefit analysis measures were established. The first part of the socio-economic assessment, related to the national assessment of costs and benefits, has been completed, and two inter-ministerial workshops were held. The second part of the socio-economic study, related to the assessment of costs and benefits of local adaptation measures, is in progress and it is expected it will be completed within a few months. It is anticipated that the socio-economic reports will feed into national reporting to the UNFCCC, and the project will take additional measures to disseminate the information to policy makers, such as producing policy briefs.

113. Output 1.2. A package of modifications in the water code, with particular focus on communal water management; and financial incentives for water efficiency (e.g. differentiated and progressive tariff) developed

114. The project is providing recommendations and inputs to the revision of the water code, and other relevant legislation and regulations, such as the law on Daihans:

- On amendments and additions to the draft Water Code;
- On draft a law on WUAs and further transfer of these documents to key stakeholders;

- Sub- regulations on communal water m-t (WUA) on local level;
- Participation in the discussion of the draft indicated documents in the Ministry of Water economy and other key ministries and departments;
- On amendments and additions to the Law of Turkmenistan on Daihan associations.

115. A working group was established to review the draft Water Code in view of the impacts of climate change on water resources to amend water legislative acts based on climate change cost estimations. The project contributed to development of the new Water Code, initiating and supporting discussions on the principles of the basin approach to water resources management, an approach of integrated management of water resources, payments for excessive water use (over a limit), creation of public funds, public participation in water management, protection of local waters (surface runoff in the mountain area and temporal runoff in desert). The project team of national consultants generated a package of amendments to the new Water Code and on sets of sub-regulations under it. Several preliminary articles and sub regulation acts were prepared for the Water Code in relation to climate change aspects.

116. The project has also developed a proposed water tariff regime, which is being reviewed and considered by the government. A workshop to discuss the methodology for calculating tariffs for water supply services was conducted with the Ministry of Water Economy, Ministry of Economy and Development, Ministry of Agriculture, the Ministry of Nature Protection, and other interested ministries.

117. The book "Pastures of Turkmenistan. The book is ready to publish. State registration for the book was received. The micro-purchase process in process.

B. Outcome 2: Resilience to climate change enhanced in targeted communities through the introduction of community-based adaptation approaches

118. Output 2.1: At least 4,000 agri-pastoralists of the Nohur mountainous region develop and implement water harvesting and saving techniques (such as slope terracing, small rainwater collection dams, contour and stone bunds, planting pits, tillage, mulching) to improve soil moisture levels

119. The level and directness of the benefit for individuals in each of the target regions varies greatly. In Nohur the project has supported the construction of small-scale dams as watering points for livestock, which generally benefit all of the communities whose herds use the range area where the water points are, which may equal 4,000 people or greater. However the project is also supporting specific irrigation measures and techniques, such as drip irrigation and water storage tanks, in one specific village in the region, which will have a much greater benefit for the approximately 1,000 people in that village.

120. Summary of concrete adaptation measures completed in Nohur:

- Five dams with water reservoirs were constructed;
- Repair of two dams with water reservoirs was done;
- Repair works around four springs were done;
- Concrete basin (capacity - 400 м3) for water storage was constructed;

- Reconstruction and repair of the existing drip irrigation system (20 ha - 10 ha garden, 10 ha - vegetables) were done;
- Design of a drip irrigation system in the settlement "Garavul" (10ha) in process. Company was selected by tender process and work in process;
- Design of a drip irrigation system in the settlement "Konegummez" (37 ha) in process. Company was selected by tender process and work in process;
- Local management center is created;
- The organization of the production of organic-compost and bio-humus in process;
- Local nursery is functioning;
- Cost-benefit analyses of adaptation measures in process in accordance with AWP 2014.

121. It will be important for the project to clearly document the actual economic benefits generated for the community, which is being assessed as part of the 2nd part of the socio-economic study. In addition, the project must continue to emphasize the value of the demonstration of these activities, and focus on information and lesson sharing to catalyze greater results than for the single community targeted, which represents only a tiny fraction of the overall need.

122. Output 2.2: At least 8,000 farmers implement community-based well and watering point management measures, including sand fixation and introduction of drought resistant traditional grain varieties in the Karakum desert region

123. Summary of concrete adaptation measures completed in Karakum:

- Five new wells using the traditional method were constructed;
- Two new wells using the traditional method in process;
- Repair the existing two wells were done;
- Repair the existing four wells in process;
- The capital repair of two sardobs for farm #1 (500 м3) in Bori settlement were done;
- The capital repair of two sardobs (500 м3) in Yanyk settlement were done;
- Cleaning of four takyrs and kaks (rainwater pits) for farm № 1 and № 2 in process;
- Construction of six sardobs (60 м3) were done;
- Design of a drip irrigation system for organization of pilot-demonstration area in the irrigated land “Chalysh” (4 ha). Company was selected by tender and work in process;
- Necessary materials and delivery for sand dune fixation on 8-10 ha done;
- Works related to sand dune fixation and afforestation on 8 - 10 ha was done on 70%;
- Local nursery is functioning;
- Cost-benefit analyses of adaptation measures in process in accordance with AWP 2014.
- Local management center is functioning;

124. Output 2.3. At least 20,000 farmers in the Sakarchaga area benefit from improved irrigation services through the introduction of canal level, localized management practice

125. The project supported construction of sixteen water-regulating devices, four water-regulating devices with one outlet/discharge, and one water-regulating device with two outlet/discharges. The project has also made progress toward the planned activity of cleaning 31.5 km of irrigation canals in the Farmer Union Zahmet district, though this has not yet been completed.

126. The progress on the project results in Sakarchaga is a bit slower than in the other two target regions, but it also involves the most complex community-level changes in terms of modifying the Daihan level water management decision-making process, along with the coordination with the relevant government institutions.

C. Outcome 3: Community-managed water delivery services introduced to benefit over 30,000 farmer and pastoralist communities in the three target agro-ecological zones

127. Output 3.1: Mandates and institutional functions of local associations strengthened to improve local water services that are more resilient to increasing water stress and benefit at least 30,000 farmers and pastoralists

128. The project has conducted multiple trainings in each project region to organize water user groups with clear objectives and institutional capacity and management skills, including trainings on the subjects of "Organizational Development and Management of Water User Groups," research tools to justify the implementation of local projects, and Training of Trainers. In addition, working meetings on definition of the structure of a group of water users and water use rules in the project office were conducted.

129. The project is working with a total of more than six groups in the three target regions (one WUG in Nohur, two farms in Karakum, and four brigades in Sakarchaga), but progress in enhancing the capacity of these community organizations to improve water management is uneven. There is greater progress in Nohur, some progress in Karakum, and less progress in Sakarchaga. The project is still working to influence and modify the official regulations for the functioning of WUA/WUGs. There are other community water management structures in place which deal with the allocation of water in the community, but it is expected that the WUA/WUGs will further support the efficient use of water at the farm level in the areas under their jurisdiction. The project is continuing to make progress and working with the community-groups to form and implement the WUA approach,

130. Output 3.2: Based on VCA assessments, community-based adaptation plans with particular focus on water delivery services designed and implemented through the government's social development programmes with direct engagement of at least 30,000 farmers and pastoralists

131. The project is working to develop community plans for efficient, climate-resilient water development at the community level. These plans would be integrated with and provide inputs to the government's community-development investment plans, to leverage further government financing for additional and expanded application of efficient water management technologies and techniques. This is the critical link for the catalytic role for the project, to leverage the experience from the field-level demonstration activities into broader government investment in the water sector. There are two examples so far in Sakarchaga where government investment is

being leveraged for more efficient irrigation infrastructure (e.g. financing for pivot irrigation in 350 ha), but it remains to be seen if similar financing will be leveraged in Nohur or Karakum.

132. Output 3.3: At least 6 projects funded up to a total of $400,000 through WUAs and associated community groups

133. This is a second level of activity following the initial direct project investment under Outcome 2, as the investment under this Output will be done through the WUAs that are being established. Although not yet achieved, there is good progress toward the development of these investment plans through community prioritization and the development of the community plans (Output 3.2), and it is anticipated that the project will succeed in completing this investment by the end of the project.

134. Output 3.4: Lessons learned on community-based adaptation options under various agro-climatic conditions of Turkmenistan disseminated through ALM and other networks

135. The project has been highly active in producing and generating articles, press releases, and short summaries of the project activities, which have been published on the project website and the ALM website. At the same time, the project still needs to focus on producing highly impactful case study documents that clearly outline the experience of the project and identify key lessons for potential wider application in Turkmenistan and beyond. The project team has plans to develop these types of lessons learned documents, and will be continuing to work on this. This is also an activity that will be most beneficial closer to the end of the project, to fully capture the project's experience.

D. Impacts and Project Contribution to Adaptation Fund Indicators and Targets

136. The project is expected to contribute to the Adaptation Fund strategic indicators and targets as indicated in Annex 8 of this report.

E. Replication and Up-scaling

137. The project does not include a specific replication or up-scaling component or strategy, but this will be a critical potential future activity if the project is to make a significant contribution to climate resilience in Turkmenistan. Some of the project's influence may be scaled-up as a result of potential revisions to key pieces of national water management policy and legislation, such as the Water Code. If the project succeeds in actually introducing progressive water pricing mechanisms in Turkmenistan this would naturally have a significant catalytic effect.

138. Replication is highly important for the "demonstration" activities being implemented in the pilot regions. For example, in Nohur the project activities have been focused in the settlement of Konnegummez. For this is one settlement of a few thousand people the project is supporting 20 hectares of drip-irrigation, in a region with multiple other similar communities. There are clearly opportunities for other communities in the region to benefit from the project lessons and experiences, including the nearest settlement Gavruz, which is near to Konnegummez and has a larger population.

139. Some of the demonstration activities may be too costly to be rapidly and widely scaled up, but ideally through dissemination of knowledge based on the project's experience the Turkmenistan government, as well as community-level stakeholders themselves, may continue

to expand investment in efficient water management technologies and practices. As one stakeholder noted, in the Karakum region the project is investing more in rural water security than the government has invested in decades – despite the fact that the Government of Turkmenistan has vastly more resources than the AF project. Thus a critical element for the project's long-term effectiveness and success is to actual leverage its demonstration activities into larger-scale government investment plans. The project has made some initial progress in this direction in the pilot regions through the community-led development of climate resilience strategic priorities, but the government has not yet taken up these outputs in a meaningful way. The first recommendation of this evaluation targets these key issues.

VIII. Sustainability

140. While a sustainability rating is provided here as required, sustainability is a temporal and dynamic state that is influenced by a broad range of constantly shifting factors. In the context of AF-funded projects there is no clearly defined timeframe for which results should be sustained, although it is implied that they should be sustained indefinitely.[16] When evaluating sustainability, the greater the time horizon, the lower the degree of certainty possible. In addition, by definition, mid-term evaluations are not well-positioned to provide ratings on sustainability considering that many more activities will be undertaken before project end that may positively or negatively affect the likelihood of sustainability.

141. The various risks to sustainability are discussed in further detail in each of the sections below. Based on UNDP evaluation policies and procedures, the overall rating for sustainability cannot be higher than the lowest rating for any of the individual components. Therefore the overall **sustainability** rating for the Turkmenistan farming systems project for this mid-term evaluation is ***moderately likely*****.**

A. Financial Risks

142. There are a number of different types of potential financial risks to sustainability for the Turkmenistan AF project, though as of the mid-term evaluation, this aspect of sustainability is considered *moderately likely*. The financial risks to sustainability are slightly different in each of the three pilot regions, because in each region the project is supporting different types of demonstration activities. In Nohur, demonstration activities include construction of small dams, and investments in modern irrigation technologies. Once constructed, dams are likely to require little maintenance. Drip irrigation systems, however, frequently need replacement parts and materials. Based on information collected during the evaluation mission, it appears the community in Nohur has the commitment and the means to maintain the capital investments supported initially by the project. In the Karakum region the project is supporting wells, sardobs, and other types of traditional water management infrastructure. These require maintenance but little additional ongoing investment, although diesel generators are often used to run pumps to circulate water, which do require some financial investment for maintenance. In Sakarchaga the

[16] The project document does not clearly indicate the expected lifespan of the various infrastructure investments supported under the project. However, some types of infrastructure, such as the wells and sardobs can have a 50+ year lifespan if they are regularly maintained.

project demonstration activities are less advanced, though some water control devices have been installed; these also require some maintenance but little ongoing investment.

143. The second aspect of financial sustainability relates to the larger picture of water management in the country, and the proposed tariff regime that the project aims to introduce. The financial risk to sustainability is whether the tariff regime proposed by the project will ultimately lead to an improved management regime, or whether it will lead to or fail to eliminate perverse incentives for unsustainable water use and management.

B. Socio-political Risks

144. Socio-political risks to sustainability relate most directly to stakeholder ownership and the willingness and ability of stakeholders to maintain the project results; this aspect of sustainability is considered *moderately likely*. At the level of the pilot regions the project has secured strong engagement and participation from the local communities, particularly in Nohur and Karakum, slightly less so in Sakarchaga. The local water management system in Sakarchaga is the most structured, as in this region the land use is almost entirely individual farmer leaseholders working in cultivated agriculture, primarily producing cotton for the state orders. Thus it is not surprising that more significant effort is required to introduce modified systems for water management, such as the Water User Association and Water User Groups.

145. The socio-political risks at the national level are difficult to determine, but while there are some risks, the outlook is optimistic. According to key stakeholders, the national government is committed to water sector reform, although it is likely to occur in incremental steps over a significant period of time. The revision of the Water Code appears highly likely however.

C. Institutional and Governance Risks

146. There are some institutional and governance risks to sustainability, mainly related to the inadequate levels of institutional capacity in Turkmenistan's water management institutions, both at the national and sub-national levels. In this sense there are not specific institutional risks to the project results, but broad ones related to the overall ability of the responsible authorities to effectively implement water sector policies. This aspect of sustainability is considered *moderately likely*.

D. Environmental Risks

147. There are limited environmental risks to sustainability, and a rating of likely is assessed for this component of sustainability. The major environmental risk to sustainability of the project results is climate change, which is the issue the project is targeting, working to reduce climate change risks through adaptation measures. Nonetheless, if rainfall patterns significantly change, the benefits from the project investments particularly in Nohur and Karakum (e.g. dams, and sardobs and takyrs) could be at risk. In Sakarchaga the main and critical source of water is the Karakum canal from the Amudarya River, which is also at risk due to climate change due to potential reduction in snow melt from the river's headwaters. On the whole however, the specific environmental risks to the sustainability of the specific Turkmenistan AF project results is limited.

IX. Mainstreaming of UNDP Program Principles

148. The evaluation report is required to address the mainstreaming of UNDP program principles in relation to the project. The principle of UNDAF and CPAP linkages has been addressed under relevance, in Section IV.A.ii. The principle of disaster risk reduction and climate change mitigation/adaptation is covered throughout this report, as it is the primary focus of the project. The remaining principles are addressed below.

149. *Poverty-Environment Nexus / Sustainable Livelihoods:* This principle is clearly addressed through the project's work to ensure that climate resilient sustainable livelihoods are supported and strengthened in each of the three pilot regions. There is a direct link to the poverty-environment nexus as communities with higher levels of poverty are less resilient to climate change. At the same time, addressing poverty requires careful attention to environmental sustainability, as some means to addressing poverty for climate change adaptation can have harmful environmental effects, which actually exacerbate the negative effects of climate change. One example is the approach of expanding watering points for livestock, which can lead to greater numbers of livestock, which can contribute to issues such as overgrazing and erosion.

150. *Crisis Prevention and Recovery:* This is not a relevant issue in the context of the Turkmenistan AF project, apart from the fact that the project is working to reduce the likelihood of climate-induced crises, such as famine.

151. *Gender Equality / Mainstreaming:* As stated in the most recent PPR, "During the reporting period (VCA, formation of investment plans, seminars, trainings, round tables and etc.) women, land owners, doctors and teacher were actively engaged in the implementation of all project activities. As a result, the project team noticed during meetings with them that women concentrate their attention on improving the social conditions of life (construction of kindergartens, construction of enterprises related to local crafts (carpet weaving , embroidery etc.) They suggested solving the problems of utilization of household waste. Especially in desert territory." At the community, men are the most engaged with project activities related to the implementation of water management investments, though this is clearly for culturally appropriate reasons. The project also, for example, included gender related issues among the Terms of Reference for project local coordinators, such as "Facilitate the establishment of a gender sensitive Community Steering Committee (CSC) ensuring that a fair process is adopted to agree the CSC members are a good representative of the community;" and "Promote principles of equal gender representation in decision-making processes, and advocate for gender empowerment."

152. *Capacity Development:* The project is working to strengthen the capacity for efficient and effective water management in Turkmenistan at both the community and national levels. The project has held multiple community trainings in each of the three pilot regions, related to climate change adaptation and water management approaches. At the national level the project is supporting systemic capacity development, through strengthening water management policies and regulations. The project has few activities related to specific capacity development of national water management institutions.

153. *Rights-based Approach:* A "rights-based approach" has ambiguous meaning for a project working on issues inherently related to water rights and land rights, but in a country where there

is still limited private ownership, and where water rights do not exist in the classic sense. Nonetheless, all project activities are considered implemented under a rights-based approach, as the project is respecting traditional systems and rights, while attempting to enhance the efficiency of water management.

X. Recommendations and Lessons

A. Lessons from the Turkmenistan AF Project

154. ***Lesson:*** Water management approaches have to be carefully adapted to the local context. Project experience has shown that the WUA/WUG approach works differently in the three project pilot areas – most effective in Nohur due to the land tenure situation and local agricultural economy, acceptable in Karakum despite livelihoods primarily based on pastoralism and despite large distances, and slightly challenging in Sakarchaga due to community-based institutions already in place and the rigidity of the existing agricultural-economic-water systems.

155. ***Lesson:*** The experience of the Turkmenistan farming systems project has suggested that it can be beneficial to prioritize awareness raising and education activities earlier in the project implementation period, to build community stakeholder buy-in and awareness for adaptation measures. Similar experiences have been seen in other international development projects – for example, in a Global Environment Facility funded-project in Bosnia and Herzegovina focusing on mainstreaming biodiversity conservation in land-use planning. When communities get more information and a better understanding of the issues, they are more motivated to take action on their own.

156. ***Lesson:*** One lesson from the experience of the Turkmenistan farming systems project is that UNDP and government partners need to prepare prior to final project approval for immediate ramp-up of human-resources and any necessary formal agreements or arrangements (such as registration of the project as a foreign assistance project).

157. ***Lesson:*** An important lesson documented in the annual PPR for 2014 is that "Changing the legislative basis to recognize climate impacts is a multi-year process, and dependent upon national timetables and processes, rather than the project." This relates to the project's efforts to contribute revisions to the Water Code, water pricing policies, and other legislation, and this evaluation clearly validates this lesson.

158. ***Lesson:*** An important lesson documented in the PPR with much wider applicability is that community level adaptation measures (pasture wells, sustainable agriculture, soil fixation) are better pursued through grant arrangements than through commercial tender. The mid-term evaluation validates that this approach has been more efficient than going through a commercial tender, and has helped catalyze stakeholder ownership by the communities themselves, since they are directly involved in carrying out the physical work, and contributing their own resources for co-financing.

B. Recommendations for the Remainder of Implementation of the Turkmenistan AF Project

159. The recommendations from the mid-term evaluation are summarized below. The primary target audience for each recommendation is identified in brackets at the end of the recommendation text.

160. ***Recommendation 1:*** The critical element for the Turkmenistan AF project to achieve transformational changes in Turkmenistan is the extent to which the demonstration activities advocated by the project are taken up and incorporated in broader government investment plans for the water sector. The experiences and lessons from the project pilot sites need to be shared broadly with the communities in the regions of the pilot areas, and integrated with government planning for those regions. To support this long-term goal the project needs to continue to emphasize and focus on documenting and disseminating information and experiences from the project pilot regions. Activities such as widespread adoption of drip-irrigation, and community-based management of water resources could represent transformational change in Turkmenistan, but a pathway must be built from the activities of this project to the targeted long-term results. There must continue to be a focus on replication and catalyzing up-scaling of the climate resilient water management approaches supported by the project. More specifically, the project must undertake direct measures to document and disseminate the experiences of the pilot regions, with dissemination of information at the sub-national and national levels. *[UNDP, Government of Turkmenistan]*

161. ***Recommendation 2:*** The Turkmenistan AF project had a slow initial start, but implementation progress has been impressive over the past 18 months. To avoid a significantly extended project completion timeframe, the project must continue to ensure that financial delivery continues apace. On a month-to-month basis the project team must closely track annual financial delivery, and take any measures necessary to ensure that a high level of annual financial delivery is achieved. The project team and UNDP should work to ensure that the project is completed as close to the original timeframe as expected, to ensure overall cost-efficiency and maintain the relative level of management costs. A six-month no-cost extension may be necessary, but should only be considered if additional time is required to complete key project results, such as revision of the water code and associated regulatory changes. It is anticipated that the field-level project activities can be completed within the anticipated remaining time. *[UNDP, PMU, Steering Committee]*

162. ***Recommendation 3:*** The project must ensure there is consistent and adequate technical and human resource capacity to ensure successful implementation. The project implementation approach has been successful, but there may be some changes in the second half of the project – notably, the project CTA's contract will be expiring. This specific change may not be a critical risk, but the project partners must continue to monitor to ensure that the project has adequate implementation arrangements and human resources to continue the strong progress seen in the past 18 months. This may require contracting additional international expertise, or expanding the terms of reference of individuals currently engaged with the project. *[UNDP, Government of Turkmenistan]*

163. ***Recommendation 4:*** This evaluation recommends that an audit be conducted for 2014, to confirm that the issues identified in the 2012 audit have been adequately addressed. [UNDP, PMU]

164. ***Recommendation 5:*** To strengthen the value of the field-level demonstration activities, the project should work to clearly document the cost-benefit analysis of the various water management activities and infrastructure investments undertaken. Financial data is often a critical element of advocacy at both the local and national level. Clearly demonstrating the

financial value of the approaches the project is demonstrating (e.g. drip irrigation, etc.), would be highly useful for catalyzing replication and up-scaling. *[PMU, Steering Committee]*

165. ***Recommendation 6:*** The project has made valuable progress in demonstrating specific water management technologies in the pilot regions, but there may be opportunities to further strengthen the climate resilience of the agriculture-based rural livelihoods of the communities in the pilot regions, to allow communities to receive greater economic benefit with less water use. The project should consider the overall economic picture related to water-dependent livelihoods in the pilot communities, and assess the feasibility of additional value-added processing for key commodities related to the specific agricultural products the project is already supporting. However, it is critical to keep the linkage to climate resilience, ensuring that any activities supported represent long-term sustainable adaptations to climate change. *[PMU, Steering Committee]*

166. ***Recommendation 7:*** To support the previous recommendation on information dissemination, the project should strengthen the awareness and outreach activities, at the national and local level. The project has been highly dynamic in producing news releases and information available to the international community, but a similar level of effort needs to be concentrated on the communities neighboring the specific pilot regions, to disseminate the project experiences to other climate-risk communities, as well as to policy makers. One specific approach could be to organize a national end-of-project conference to share and widely disseminate the final project lessons and experiences. *[PMU, Steering Committee]*

167. ***Recommendation 8:*** The Turkmenistan AF project has significance at various national levels in terms of Turkmenistan's efforts to respond to climate change. One further important way that the project could provide highly useful outputs would be to specifically contribute to the development of the National Adaptation Plan (NAP), currently in the initial stages of development. *[PMU, UNDP, Government of Turkmenistan]*

168. ***Recommendation 9:*** The project should further extend its stakeholder engagement at the national level. At the field level the Turkmenistan AF project appears to have been highly successful in engaging the local communities, and building stakeholder ownership. Key national-level institutions have been involved as well, but there remain opportunities to engage additional relevant national stakeholders. These include, for example, the Animal Husbandry State Association (particularly in the context of the Karakum and Nohur pilot regions). Also, for example, one of the agricultural universities has a pilot site for testing irrigation techniques that is located very near to Ashgabat, which could be leveraged as a valuable partnership for the project in multiple ways. Another important stakeholder that has not been highly engaged thus far is the state committee on emergency situations. *[PMU, Steering Committee]*

XI. Annexes

Annex 1: Terms of Reference

Annex 2: Mid-term Evaluation Matrix

Annex 3: Rating System and Rating Table

Annex 4: Documents Reviewed

Annex 5: Interview Guide

Annex 6: Evaluation Mission Itinerary

Annex 7: Results Framework Indicator Target Assessment

Annex 8: Turkmenistan AF Project Contributions to Adaptation Fund Strategic Results

A. Annex 1: Terms of Reference

TERMS OF REFERENCE FOR MIDTERM EVALUATION
"Addressing climate change risks to farming systems in Turkmenistan at national and community level" project

1. INTRODUCTION

In accordance with the UNDP and AF M&E policies and procedures, a mid-term evaluation of the full-size project **"Addressing climate change risks to farming systems in Turkmenistan at national and community level"** implemented through the UNDP is to be undertaken in 2014. The project started on the 01.10.2011 and is in its 3rd year of implementation. This Terms of Reference (TOR) sets out the expectations for this mid-term evaluation.

The essentials of the project to be evaluated are as follows:

Project Title:	**"Addressing climate change risks to farming systems in Turkmenistan at national and community level"**			
UNDP Project ID:	00074953	**Project financing**	*at endorsement (Million US$)*	*at MTE (Million US$)*
ATLAS Project ID:	TKM10	AF financing:	US$ 2,929,500	
Country:	Turkmenistan	IA/EA own:		
Region:	Central Asia (CA)	Government:		
Focal Area:	Ashgabat	Other:		
		Total co-financing:		
Executing Agency:	MINISTRY OF NATURE PROTECTION	Total Project Cost in cash:	US$ 2,929,500	
Other Partners involved:		ProDoc Signature (date project began):		Date: April 12, 2011
			Planned closing date: September 2016	Revised closing date:

2. PROJECT BACKGROUND INFORMATION AND OBJECTIVES

The proposed project aims to overcome barriers to addressing immediate and long term adaptation needs in the water sector in Turkmenistan in order to achieve greater water efficiency and productivity under climate change induced aridification. The project will therefore aim to strengthen water management practices at national and local levels in response to climate change induced water scarcity risks to local farming systems in Turkmenistan. The project takes a comprehensive approach towards achieving this objective by encompassing national level water policy and local community level action to improve water efficiency and supply services.

3 outcomes will contribute to this objective; the progress toward the objective and outcomes is measured through the following indicators:

Objective / Outcomes	Outputs and indicators	Target by end of project, relative to the baseline of 2009 (unless specified otherwise)
Objective: To strengthen water management practices at national and local levels in the context of climate change risks induced water scarcity to farming systems in Turkmenistan		
Outcome 1: Institutional capacity to develop climate resilient water policies in agriculture strengthened	**Output 1.1.** Socio-economic impact of climate change on water availability costed and documented, including cost-benefit analysis of adaptation measures **Indicator 1.1.1:** Study on socio-economic impacts of climate change on water availability, including cost-benefit analysis of adaptation measures conducted; **Indicator 1.1.2:** Number of water legislative acts amended based on climate change cost estimations; **Output 1.2:** A package of modifications in the water code, with particular focus on communal water management; and financial incentives for water efficiency (e.g. differentiated and progressive tariff) developed; **Indicator 1.2.1:** Number of water regulations to introduce progressive and differentiated tariff and water delivery services under communal management	A package of amendments to water code with proposed water tariff and other economic instruments developed and submitted for adoption by end of 2012 Update of the water code to ensure explicit recognition of on climate impacts on water resource availability by end of 2013 At least 2 sets of sub- regulations developed under the Water Code to implement a) progressive and differentiated tariffs, b) support for water delivery services under communal management
Outcome 2: Resilience to climate change enhanced in targeted communities through the introduction of community-based adaptation approaches **Indicator 2. 1**: Number of community based adaptation solutions implemented at the local level upon project closure. **Indicator 2.2:** % of population with improved water management practices resilient to climate change impacts in the targeted regions.	At least one water harvesting technique and saving measures implemented in Nohur region to benefit 4,000 agri-pastoralists by end of 2014 At least two watering points established in Karakum region to benefit 8,000 farmers and pastoralists by end of 2014 Set of at least three agronomic measures (terracing, intercropping, saksaul planting) implemented in at least 3 communities by end of 2014 Canal level irrigation improvement measures implemented in the Sakar-Chaga region to benefit 20,000 people by end of the project	**Output 2.1:** At least 4,000 agri-pastoralists of the Nohur mountainous region develop and implement water harvesting and saving techniques (such as slope terracing, small rainwater collection dams, contour and stone bunds, planting pits, tillage, mulching) to improve soil moisture levels; **Indicator 2.1.1:** water harvesting and saving techniques demonstrated/tested in targeted Nohur area; **Output 2.2:** At least 8,000 farmers implement community-based well and watering point management measures, including sand fixation and introduction of drought

		resistant traditional grain varieties in the Karakum desert region; **Indicator 2.2.1:** Community based well and watering point management measures tested and demonstrated in targeted Karakum area **Output 2.3.** At least 20,000 farmers in the Mary Oasis benefit from improved irrigation services through the introduction of canal level, localized management practice; **Indicator 2.3.1:** Canal level management tested and demonstrated in targeted Sakar-Chaga area
Outcome 3: Community-managed water delivery services introduced to benefit over 30,000 farmer and pastoralist communities in the three target agro-ecological zones. **Indicator 3.1** Number of associations with improved institutional capacity to deliver water services to target communities. **Indicator 3.2:** % of targeted population with more secure access to water services in the face of climate change where communal management systems adopted.	At least 6 associations have clear mandates, institutional capacities and skills to manage and deliver water services to the target communities by end of 2013 At least 6 community plans on water adaptation have been designed and budgeted through the government's social development programmes by end of the project At least 4 local water adaptation investment projects have been funded through WUA and associated community organizations By end of the project at least 80% of targeted population of approximately 30,000 people has access to improved water services that are resilient to drought and climate aridification At least three lessons learned notes per targeted agro-ecological system, developed and widely disseminated through knowledge networks for further replication by end of project	**Output 3.1:** Mandates and institutional functions of local associations strengthened to improve local water services that are more resilient to increasing water stress and benefit at least 30,000 farmers and pastoralists **Indicator 3.1.1:** Number of associations with modified mandates strengthening their institutional roles to manage and deliver water services to the target communities **Output 3.2:** Based on VCA assessments, community-based adaptation plans with particular focus on water delivery services designed and implemented through the government's social development programmes with direct engagement of at least 30,000 farmers and pastoralists **Indicator 3.2.1:** Number of community plans has been budgeted through the government's social development programmes **Output 3.3:** At least 4 projects funded up to a total of $400,000 through WUAs and associated community groups **Indicator 3.3.1:** Number and value of projects through the WUAs

		Output 3.4: Lessons learned on community-based adaptation options under various agro-climatic conditions of Turkmenistan disseminated through ALM and other networks **Indicator 3.4.1:** Number of lessons learned notes formulated **Indicator: 3.4.2:** Number of lessons learned included in the ALM and other knowledge networks

3. OBJECTIVES OF THIS MID-TERM EVALUATION (MTE)

The objective of the MTE is to provide an independent analysis of the progress of the project so far. The MTE will identify potential project design problems, evaluate progress towards the achievement of the project objective, identify and document lessons learned (including lessons that might improve design and implementation of other UNDP-GEF supported AF projects), and make recommendations regarding specific actions that should be taken to improve the project. The MTE will evaluate early signs of project success or failure and identify the necessary changes to be made. The project performance will be measured based on the indicators of the project's logical framework (see Appendix 1).

The evaluation is focused on a comprehensive project assessment and enables to make a critical evaluation of administrative and technical strategies, problems and restrictions associated with the large-scale international and multilateral initiatives. The evaluation shall also provide the recommendations in relation to the strategies, approaches and/or activities in order to enhance the project capacities of achieving the expected outcomes. The evaluation results will be incorporated in the recommendations to improve the implementation of a given project stage in the forthcoming years.

The MTE must provide evidence based information that is credible, reliable and useful. The evaluation team is expected to follow a participatory and consultative approach ensuring close engagement with government counterparts, UNDP Country Office, project team, UNDP-AF Regional Technical Adviser based in the region and key stakeholders. The evaluation team is expected to conduct field missions to Ashgabat including the following project regions that represent typical conditions of three major agro-ecological zones in Turkmenistan—that is, mountain (south-western part of Central Kopetdag Mountains, closer to the border with Iran), desert (Karakum region that is located in the Central Karakum Desert), and oasis (Sakar-chaga is located in the north-western part of Mary Velayat in the delta of Murgab River) systems. Interviews will be held with the following organizations and individuals at a minimum:

1. UNDP staff who have project responsibilities;
2. Executing agencies
3. The Chair of Project Board
4. The NPC
5. Project stakeholders, to be determined at the inception meeting; including academia, local government and CBOs.

The team will evaluate all relevant sources of information, such as the project document, project reports – including Annual PPRs, AF Tracking Tools, project budget revisions, progress reports, project files, national strategic and legal documents, and any other materials that the team considers useful for this evidence-based evaluation. A list of documents that the project team and UNDP Country Office will provide to the team for review is included in Appendix 2 of this Terms of Reference.

Purpose:

(i) To evaluate the overall project activities in relation to the objectives and expected outcomes as stated in the project document and the other related documents

(ii) To evaluate the project effectiveness and cost-efficiency

(iii) To critically analyze the arrangements of project management and implementation

(iv) To evaluate the progress attained so far in relation to the project outcomes

(v) To investigate the strategies and plans intended for the timely achievement of the overall project goal

(vi) To list and document the first lessons learned in respect of the project design, its implementation and management

(vii) To assess the sustainability of project interventions;

(viii) To assess the relevance in relation to the national priorities

(ix) To provide the recommendations for the future project activities and, where necessary, for the project implementation and management arrangements.

In particular, the mid-term evaluation exercise will assess the progress of creating the basic information, alleviation of threats and identification of any constraints to the project implementation and their causes. It intends also to provide the recommendations for corrective measures to be undertaken. An effective measure to correct the problem areas identified, constraining the project implementation, will be required before the decision to be made in relation to the project continuation.

The mid-term evaluation report shall be a separate document which will contain the recommendations and conclusions.

The report will be intended to meet the needs of all the related parties (AF, UNDP, the project's National Steering Committee, local communities and other related parties in Turkmenistan and foreign countries).

4. SCOPE OF THE MTE

The evaluation team will evaluate the following three categories of project progress. For each category, the evaluation team is required to rate overall progress using a six-point rating scale outlined in Appendix 3.

4. 1 Progress towards Results

Project design:

- Evaluate the problem addressed by the project and the underlying assumptions. Evaluate the effect of any incorrect assumptions made by the project. Identify new assumptions.
- Evaluate the relevance of the project strategy (and theory of change) and whether it provides the most effective route towards expected/intended results.
- Evaluate how the project addresses country priorities.
- Evaluate the baseline data included in the project results framework and suggest revisions as necessary.

Progress:

- Evaluate the outputs and progress toward outcomes achieved so far and the contribution to attaining the overall objective of the project.
- Examine if progress so far has led to, or could in the future catalyze, beneficial development effects (i.e. income generation, gender equality and women's empowerment, improved governance etc...) that should be included in the project results framework and monitored on an annual basis. Suggest measures to improve the project's development impact, including gender equality and women's empowerment.
- Examine whether progress so far has led to, or could in the future lead to, potentially adverse environmental and/or social impacts/risks that could threaten the sustainability of the project outcomes. Are these risks being managed, mitigated, minimized or offset? Suggest mitigation measures as needed.
- Evaluate the extent to which the implementation of the project has been inclusive of relevant stakeholders and to which it has been able to create collaboration between different partners, and how the different needs of male and female stakeholders has been considered. Identify opportunities for stronger substantive partnerships.

4. 2 Adaptive management

Work Planning

a) Are work planning processes result-based? If not, suggest ways to re-orientate work planning to focus on results.
b) Examine the use of the project document logical/results framework as a management tool and evaluate any changes made to it since project start. Ensure any revisions meet UNDP-GEF requirements and evaluate the impact of the revised approach on project management.

Finance and co-finance:

a) Consider the financial management of the project, with specific reference to the cost-effectiveness of interventions.
b) Complete the co-financing monitoring table (see Appendix 4).
c) Evaluate the changes to fund allocations as a result of budget revisions and the appropriateness and relevance of such revisions.

Monitoring Systems.

a) Evaluate the monitoring tools currently being used: Do they provide the necessary information? Do they involve key partners? Do they use existing information? Are they efficient? Are they cost-effective? Are additional tools required?
b) Ensure that the monitoring system, including performance indicators meet UNDP-GEF minimum requirements. Develop SMART indicators as necessary.
c) Ensure broader development and gender aspects of the project are being monitored effectively. Develop and recommend SMART indicators, including sex-disaggregated indicators as necessary.
d) Examine the financial management of the project monitoring and evaluation budget. Are sufficient resources being allocated to M&E? Are these resources being allocated effectively?

Risk Management

a) Validate whether the risks identified in the project document, PPRs and the ATLAS Risk Management Module are the most important and whether the risk ratings applied are appropriate and up to date. If not, explain why. Give particular attention to critical risks.
b) Describe any additional risks identified and suggest risk ratings and possible risk management strategies to be adopted.

Reporting

a) Evaluate how adaptive management changes have been reported by the project management, and shared with the Project Board.
b) Evaluate how lessons derived from the adaptive management process have been documented, shared with key partners and internalized by partners.

4. 3 Management arrangements

a) Evaluate overall effectiveness of project management as outlined in the project document. Have changes been made and are they effective? Are responsibilities and reporting lines clear? Is decision-making transparent and undertaken in a timely manner? Recommend areas for improvement.
b) Evaluate the quality of execution of the project Implementing Partners and recommend areas for improvement.
c) Evaluate the quality of support provided by UNDP and recommend areas for improvement.

5. MID TERM EVALUATION DELIVERABLES

Deliverable	**Content**	**Timing**	**Responsibilities**
Inception Report	Evaluation team clarifies timing and method of evaluation	No later than 2 weeks before the evaluation mission	Evaluation team submits to UNDP Country Office
Presentation	Initial Findings	End of evaluation mission	To project management and UNDP Country Office
Draft Report	Full report (as template in Appendix 5) with annexes	Within 3 weeks of the evaluation mission	Sent to UNDP CO, reviewed by RTA, ICTA
Final Report	Revised report with audit trail detailing how all received comment have (and have not) been addressed in the final evaluation report).	Within 1 week of receiving UNDP comments on draft	Sent to UNDP CO

The key product expected from this mid-term evaluation is: The Mid-term Evaluation Report

The mid-term evaluation report will include:

- The facts and conclusions identified in respect of the issues to be reviewed in accordance with The Scope of Evaluation section
- Evaluation of project impact on:
    - The institution assisted and its staff;
    - The final beneficiaries including specific groups;
- Project sustainability on the basis of:
- The commitments of the governmental agencies in relation to the project objectives
- Involvement of local organizations (participatory process)
- Management and organizational factors
- Financing
- Staff development
- Recommendations for the future implementation of the project activities
- Lessons learned

The draft and final report will be prepared in the format as provided in Appendix 5 hereto. The draft report will be presented to UNDP/AF not later than (15 November 2014). The final report will be prepared on the basis of the comments to be obtained from the parties related. The deadline for the final report is (31 November 2014). The report will be presented electronically and in hard copy, in English, and will be translated into Russian for distribution to national counterparts.

6. IMPLEMENTATION ARRANGEMENTS

The principal responsibility for managing this evaluation resides with the UNDP Country Office (UNDP CO) in Ashgabat, Turkmenistan. The UNDP CO will contract the consultants and ensure the timely provision of per diems and travel arrangements within the country for the evaluation team. The project team will be responsible for liaising with the evaluation team to set up stakeholder interviews, arrange field visits with missions to to Ashgabat including the following project regions that represent typical conditions of three major agro-ecological zones in Turkmenistan—that is, mountain (south-western part of Central Kopetdag Mountains, closer to the border with Iran), desert (Karakum region that is located in the Central Karakum Desert), and oasis (Sakar-chaga is located in the north-western part of Mary Velayat in the delta of Murgab River) systems.

7. TIMEFRAME

The total duration of the evaluation will be 4 weeks starting (1 October 2014) according to the following plan:

Activity	Timeframe
Preparation	(*1-5* October *2014) (5 workdays)*
Evaluation mission and debriefing	(*8-12* October *2014) (5 workdays)*
Draft evaluation report	(*15 November 2014) (10 workdays)*
Finalisation of final report	(*31 November) (5 workdays)*

8. TEAM COMPOSITION

Evaluation will be undertake by one independent international evaluator. The consultant will not have participated in the project preparation and/or implementation and should not have conflict of interest with project related activities. The consultant should have prior experience in reviewing or evaluating similar projects. Experience with AF financed projects is an advantage.

The selection of consultant will be aimed at maximizing the overall "team" qualities in the following areas:

- Recent experience with result-based management evaluation methodologies;
- Experience applying SMART indicators and reconstructing or validating baseline scenarios;
- Competence in Adaptive Management, as applied to conservation or natural resource management;
- Demonstrable analytical skills;
- Work experience in relevant technical areas for at least 10 years;
- Excellent English communication skills;
- Project evaluation/review experiences within United Nations system will be considered an asset;
- Experience working in CA region.

9. PAYMENT MODALITIES AND SPECIFICATIONS

%	Milestone
50	Upon approval of 1st draft mid-term evaluation report
50	Upon approval of final mid-term evaluation report

10. APPLICATION PROCESS

All applications including P11 form, CV, and technical and financial proposals should be submitted to the UNDP Country Office in a sealed envelope indicating the following reference "International Consultant for Mid term Evaluation for ***"Addressing climate change risks to farming systems in Turkmenistan at national and community level"*** or by email at following address ONLY: registry.tm@undp.org by (1 July 2014, 18:00**).** Incomplete applications

will be excluded from further consideration.

Required Documents: Introduction about the consultant/CV; Proposed methodology and workplan (max 1 page); Financial proposal, including proposed fee and all other travel related costs (such as flight ticket, per diem, etc)..

Criteria for Evaluation of Proposal: The selection will be made based on the educational background and experience on similar assignments. The price proposal will weigh as 30% of the total scoring.

TORs Appendix 1: Project logframe for the programme proposal, including milestones, targets and indicators.

Objective: To strengthen water management practices at national and local levels in the context of climate change risks induced water scarcity to farming systems in Turkmenistan				
Outcomes and indicators	**Baseline**	**Targets and Milestones**	**Source of Verification**	**Outputs and indicators**
Outcome 1: institutional capacity to develop climate resilient water policies in agriculture strengthened **Indicator 1.1:** Water code subsidiary laws and regulations that introduce progressive pricing policies and communal management for local water services are in place and operational.	Government has made progressive steps towards improving water management systems. It invests heavily in the improvement and upgrade of water infrastructure and looks out for more advanced technologies. However, water policies remain outdated as well as poorly enforced due to underdeveloped regulations and subsidiary legislation. Tools and methods are missing to indentify the most cost-effective adaptation options in the water policies. Water pricing is largely inadequate. The current water policies burden the state budget and do not free resources for service improvement to farmers, especially local small holders. At the same time, farmers involved in large scale productions of water thirsty crop varieties do not receive adequate price signals to use water more efficiently. Given the increasing water shortages and priorities assigned to cash crop production the small holder subsistence farmers bear a disproportionate burden of	A package of amendments to water code with proposed water tariff and other economic instruments developed and submitted for adoption by end of 2012 Update of the water code to ensure explicit recognition of on climate impacts on water resource availability by end of 2013 At least 2 sets of sub-regulations developed under the Water Code to implement a) progressive and differentiated tariffs, b) support for water delivery services under communal management	Project annual reports; Mid term evaluation, final report; training test results; National law journal	**Output 1.1.** Socio-economic impact of climate change on water availability costed and documented, including cost-benefit analysis of adaptation measures **Indicator 1.1.1:** Study on socio-economic impacts of climate change on water availability, including cost-benefit analysis of adaptation measures conducted; **Indicator 1.1.2:** Number of water legislative acts amended based on climate change cost estimations; **Output 1.2:** A package of modifications in the water code, with particular focus on communal water management; and financial incentives for water efficiency (e.g. differentiated and progressive tariff) developed; **Indicator 1.2.1:** Number of water regulations to introduce progressive and differentiated tariff and water delivery services under communal management

	exacerbating water deficits.			
Outcome 2: Resilience to climate change enhanced in targeted communities through the introduction of community-based adaptation approaches **Indicator 2. 1:** Number of community based adaptation solutions implemented at the local level upon project closure. **Indicator 2.2:** % of population with improved water management practices resilient to climate change impacts in the targeted regions.	Some of the coping mechanisms employed by farmers, agri-pastoralists and pastoralists in the main agro-ecological systems are increasingly strained due to mounting water deficits. A combination of innovative and traditional measures hasn't been tested to improve water capture, optimize water demand and improve water efficient applications. Over 2,000,000 people live in the target regions with the majority engaged in agriculture, mainly in marginal lands and having very limited access to stable water delivery services.	At least one water harvesting technique and saving measures implemented in Nohur region to benefit 4,000 agri-pastoralists by end of 2014 At least two watering points established in Karakum region to benefit 8,000 farmers and pastoralists by end of 2014 Set of at least three agronomic measures (terracing, intercropping, saksaul planting) implemented in at least 3 communities by end of 2014 Canal level irrigation improvement measures implemented in the Sakar-Chaga region to benefit 20,000 people by end of the project	Project annual reports; Mid term evaluation, final report; Community surveys;	**Output 2.1:** At least 4,000 agri-pastoralists of the Nohur mountainous region develop and implement water harvesting and saving techniques (such as slope terracing, small rainwater collection dams, contour and stone bunds, planting pits, tillage, mulching) to improve soil moisture levels; **Indicator 2.1.1:** water harvesting and saving techniques demonstrated/tested in targeted Nohur area; **Output 2.2:** At least 8,000 farmers implement community-based well and watering point management measures, including sand fixation and introduction of drought resistant traditional grain varieties in the Karakum desert region; **Indicator 2.2.1:** Community based well and watering point management measures tested and demonstrated in targeted Karakum area **Output 2.3.** At least 20,000 farmers in the Mary Oasis benefit from improved irrigation services through the introduction of canal level, localized management practice; **Indicator 2.3.1:** Canal level management tested and demonstrated in

				targeted Sakar-Chaga area
Outcome 3: Community-managed water delivery services introduced to benefit over 30,000 farmer and pastoralist communities in the three target agro-ecological zones. **Indicator 3.1** Number of associations with improved institutional capacity to deliver water services to target communities. **Indicator 3.2:** % of targeted population with more secure access to water services in the face of climate change where communal management systems adopted.	The State continues to play a far-reaching and predominant role in the economy and acts as the main provider in ensuring adequate living standards of the population, with subsidies, price controls and the free provision of utilities underpinning the system. This has been possible largely due to revenues from the hydrocarbons sector. However, it poses large budgetary burden and results in unsustainable and ineffective water delivery services to farmer and pastoralists communities. Self-functioning and maintained services with the direct engagement of communities are not practiced. Despite existence of water user and farmer associations their role and capacities are limited to improve the water management and delivery options.	At least 6 associations have clear mandates, institutional capacities and skills to manage and deliver water services to the target communities by end of 2013 At least 6 community plans on water adaptation have been designed and budgeted through the government's social development programmes by end of the project At least 4 local water adaptation investment projects have been funded through WUA and associated community organizations By end of the project at least 80% of targeted population of approximately 30,000 people has access to improved water services that are resilient to drought and climate aridification At least three lessons learned notes per targeted agro-ecological system, developed and widely disseminated through knowledge networks for further replication by end of project	Project annual reports; Mid-term evaluation, final report; Community Surveys; Social programme budget statements	**Output 3.1:** Mandates and institutional functions of local associations strengthened to improve local water services that are more resilient to increasing water stress and benefit at least 30,000 farmers and pastoralists **Indicator 3.1.1:** Number of associations with modified mandates strengthening their institutional roles to manage and deliver water services to the target communities **Output 3.2:** Based on VCA assessments, community-based adaptation plans with particular focus on water delivery services designed and implemented through the government's social development programmes with direct engagement of at least 30,000 farmers and pastoralists **Indicator 3.2.1:** Number of community plans has been budgeted through the government's social development programmes **Output 3.3:** At least 4 projects funded up to a total of $400,000 through WUAs and associated community groups **Indicator 3.3.1:** Number and value of projects through the WUAs **Output 3.4:** Lessons learned on community-based

				adaptation options under various agro-climatic conditions of Turkmenistan disseminated through ALM and other networks **Indicator 3.4.1:** Number of lessons learned notes formulated **Indicator: 3.4.2:** Number of lessons learned included in the ALM and other knowledge networks

TORs Appendix 2: List of Documents

1. Project Document
2. AF Project Performance Reports (PPRs) & AF Tracking Tool
3. Quarterly progress reports and work plans of the various implementation task teams
4. Audit reports
5. Financial scorecards
6. The Mission Reports and Lessons learnt study
7. M & E Operational Guidelines, all monitoring reports prepared by the project; and
8. Financial and Administration guidelines.

The following documents will also be available:

9. Project operational guidelines, manuals and systems
10. Minutes of the Project Board Meetings
11. Maps
12. The AF Operations guidelines; and
13. UNDP Monitoring and Evaluation Frameworks.

TORs Appendix 3: Mid-term Evaluation Rating Scale
Progress towards results: use the following rating scale

Highly Satisfactory (HS)	Project is expected to achieve or exceed all its major global environmental objectives, and yield substantial global environmental benefits, without major shortcomings. The project can be presented as "good practice".
Satisfactory (S)	Project is expected to achieve most of its major global environmental objectives, and yield satisfactory global environmental benefits, with only minor shortcomings.
Moderately Satisfactory (MS)	Project is expected to achieve most of its major relevant objectives but with either significant shortcomings or modest overall relevance. Project is expected not to achieve some of its major global environmental objectives or yield some of the expected global environment benefits.
Moderately Unsatisfactory (MU)	Project is expected to achieve its major global environmental objectives with major shortcomings or is expected to achieve only some of its major global environmental objectives.

Unsatisfactory (U)	Project is expected not to achieve most of its major global environment objectives or to yield any satisfactory global environmental benefits.
Highly Unsatisfactory (U)	The project has failed to achieve, and is not expected to achieve, any of its major global environment objectives with no worthwhile benefits.

Adaptive management AND Management Arrangements: use the following rating scale

Highly Satisfactory (HS)	The project has no shortcomings and can be presented as "good practice".
Satisfactory (S)	The project has minor shortcomings.
Moderately Satisfactory (MS)	The project has moderate shortcomings.
Moderately Unsatisfactory (MU)	The project has significant shortcomings.
Unsatisfactory (U)	The project has major shortcomings.
Highly Unsatisfactory (HU)	The project has severe shortcomings.

TORs Appendix 4: Co-financing table

Sources of Co-financing[17]	Name of Co-financer	Type of Co-financing[18]	Amount Confirmed at CEO endorsement / approval	Actual Amount Materialized at Midterm	Actual Amount Materialized at Closing
		TOTAL			

Explain "Other Sources of Co-financing":

TORs Appendix 5: Table of Contents for the Mid-term Evaluation Report

i.	Opening page: • Title of UNDP supported AF financed project • UNDP and AF project ID#s.

[17] Sources of Co-financing may include: Bilateral Aid Agency(ies), Foundation, GEF Agency, Local Government, National Government, Civil Society Organization, Other Multi-lateral Agency(ies), Private Sector, Other

[18] Type of Co-financing may include: Grant, Soft Loan, Hard Loan, Guarantee, In-Kind, Other

	• Evaluation time frame and date of evaluation report • Region and countries included in the project • Implementing Partner and other project partners • Evaluation team members • Acknowledgements
ii.	Executive Summary • Project Summary Table • Project Description (brief) • Evaluation Rating Table • Summary of conclusions, recommendations and lessons
iii.	Acronyms and Abbreviations
1.	Introduction • Purpose of the evaluation • Scope & Methodology • Structure of the evaluation report
2.	Project description and development context • Project start and duration • Problems that the project sought to address • Immediate and development objectives of the project • Baseline Indicators established • Main stakeholders • Expected Results
3.	Findings
3.1	Progress toward Results: • Project Design • Progress
3.2	Adaptive Management: • Work planning • Finance and co-finance • Monitoring systems • Risk management • Reporting
3.3	Management Arrangements: • Overall project management • Quality of executive of Implementing Partners • Quality of support provided by UNDP
4.	Conclusions, Recommendations & Lessons • Corrective actions for the design, implementation, monitoring and evaluation of the project • Actions to follow up or reinforce initial benefits from the project • Proposals for future directions underlining main objectives • Best and worst practices in addressing issues relating to relevance, performance and success
5.	Annexes • ToR • Itinerary • List of persons interviewed • Summary of field visits • List of documents reviewed • Questionnaire used and summary of results

	• Co-financing table

B. Annex 2: Mid-term Evaluation Matrix

Evaluation Questions	Indicators	Sources	Data Collection Method
Evaluation Criteria: Relevance			
• Did the project's objective align with the priorities of the local government and local communities?	• Level of coherence between project objective and stated priorities of local stakeholders	• Local stakeholders • Document review of local development strategies, environmental policies, etc.	• Local level field visit interviews • Desk review
• Did the project's objective fit within the national environment and development priorities, including climate change adaptation priorities?	• Level of coherence between project objective and national policy priorities and strategies, as stated in official documents	• National policy documents, such as National Adaptation Plan of Action, National Capacity Self-Assessment, etc.	• Desk review • National level interviews
• Did the project concept originate from local or national stakeholders, and/or were relevant stakeholders sufficiently involved in project development?	• Level of involvement of local and national stakeholders in project origination and development (number of meetings held, project development processes incorporating stakeholder input, etc.)	• Project staff • Local and national stakeholders • Project documents	• Field visit interviews • Desk review
• Did the project objective fit Adaptation Fund strategic priorities?	• Level of coherence between project objective and AF strategic priorities (including alignment of relevant objective and outcome indicators)	• AF strategic priority documents	• Desk review
• Was the project linked with and in-line with UNDP priorities and strategies for the country?	• Level of coherence between project objective and design with UNDAF, CPAP, CPD	• UNDP strategic priority documents	• Desk review
• Did the project's objective support implementation of the UNFCCC? Other relevant MEAs?	• Linkages between project objective and elements of the UNFCCC, such as key articles and programs of work	• UNFCCC website • National UNFCCC reports	• Desk review
Evaluation Criteria: Efficiency			
• Was the project cost-effective?	• Quality and adequacy of financial management procedures (in line with Implementing Entity and national policies, legislation, and procedures) • Financial delivery rate vs. expected rate	• Project documents • Project staff	• Desk review • Interviews with project staff

Evaluation Questions	Indicators	Sources	Data Collection Method
	• Management costs as a percentage of total costs		
• Were expenditures in line with international standards and norms?	• Cost of project inputs and outputs relative to norms and standards for donor projects in the country or region • Cost of project inputs and outputs relative to norms and standards for the subject field in which the project is working	• Project documents • Project staff	• Desk review • Interviews with project staff
• Was the project implementation approach efficient for delivering the planned project results?	• Adequacy of implementation structure and mechanisms for coordination and communication • Planned and actual level of human resources available • Extent and quality of engagement with relevant partners • Quality and adequacy of project monitoring mechanisms (oversight bodies' input, quality and timeliness of reporting, etc.)	• Project documents • National and local stakeholders • Project staff	• Desk review • Interviews with project staff • Interviews with national and local stakeholders
• Was the project implementation delayed? If so, did that affect cost-effectiveness?	• Project milestones in time • Planned results affected by delays • Required project adaptive management measures related to delays	• Project documents • Project staff	• Desk review • Interviews with project staff
• What was the contribution of cash and in-kind co-financing to project implementation?	• Level of cash and in-kind co-financing relative to expected level	• Project documents • Project staff	• Desk review • Interviews with project staff
• To what extent did the project leverage additional resources?	• Amount of resources leveraged relative to project budget	• Project documents • Project staff	• Desk review • Interviews with project staff
Evaluation Criteria: Effectiveness			

Evaluation Questions	Indicators	Sources	Data Collection Method
• Are the project objectives likely to be met? To what extent are they likely to be met?	• Level of progress toward project indicator targets relative to expected level at current point of implementation	• Project documents • Project staff • Project stakeholders	• Field visit interviews • Desk review
• What were the key factors contributing to project success or underachievement?	• Level of documentation of and preparation for project risks, assumptions and impact drivers	• Project documents • Project staff • Project stakeholders	• Field visit interviews • Desk review
• What are the key risks and barriers that remain to achieve the project objective and generate Global Environmental Benefits?	• Presence, assessment of, and preparation for expected risks, assumptions and impact drivers	• Project documents • Project staff • Project stakeholders	• Field visit interviews • Desk review
• Are the key assumptions and impact drivers relevant to the achievement of Global Environmental Benefits likely to be met?	• Actions undertaken to address key assumptions and target impact drivers	• Project documents • Project staff • Project stakeholders	• Field visit interviews • Desk review
Evaluation Criteria: Results			
• Have the planned outputs been produced? Have they contributed to the project outcomes and objectives?	• Level of project implementation progress relative to expected level at current stage of implementation • Existence of logical linkages between project outputs and outcomes/impacts	• Project documents • Project staff • Project stakeholders	• Field visit interviews • Desk review
• Are the anticipated outcomes likely to be achieved? Are the outcomes likely to contribute to the achievement of the project objective?	• Existence of logical linkages between project outcomes and impacts	• Project documents • Project staff • Project stakeholders	• Field visit interviews • Desk review
• Are impact level results likely to be achieved?	• Impact indicators • Level of progress through the project's Theory of Change	• Project documents • Project staff • Project stakeholders	• Field visit interviews • Desk review
Evaluation Criteria: Sustainability			
• To what extent are project results likely to be dependent on continued financial support? What is the likelihood that any	• Financial requirements for maintenance of project benefits	• Project documents • Project staff • Project stakeholders	• Field visit interviews • Desk review

Evaluation Questions	Indicators	Sources	Data Collection Method
required financial resources will be available to sustain the project results once the AF assistance ends?	• Level of expected financial resources available to support maintenance of project benefits • Potential for additional financial resources to support maintenance of project benefits		
• Do relevant stakeholders have or are likely to achieve an adequate level of "ownership" of results, to have the interest in ensuring that project benefits are maintained?	• Level of initiative and engagement of relevant stakeholders in project activities and results	• Project documents • Project staff • Project stakeholders	• Field visit interviews • Desk review
• Do relevant stakeholders have the necessary technical capacity to ensure that project benefits are maintained?	• Level of technical capacity of relevant stakeholders relative to level required to sustain project benefits	• Project documents • Project staff • Project stakeholders	• Field visit interviews • Desk review
• To what extent are the project results dependent on socio-political factors?	• Existence of socio-political risks to project benefits	• Project documents • Project staff • Project stakeholders	• Field visit interviews • Desk review
• To what extent are the project results dependent on issues relating to institutional frameworks and governance?	• Existence of institutional and governance risks to project benefits	• Project documents • Project staff • Project stakeholders	• Field visit interviews • Desk review
• Are there any environmental risks that can undermine the future flow of project impacts and Global Environmental Benefits?	• Existence of environmental risks to project benefits	• Project documents • Project staff • Project stakeholders	• Field visit interviews • Desk review
Cross-cutting and UNDP Mainstreaming Issues			
• Did the project take incorporate gender mainstreaming or equality, as relevant?	• Level of appropriate engagement and attention to gender-relevant aspects of the project	• Project documents • Project staff • Project stakeholders	• Field visit interviews • Desk review

C. Annex 3: Rating System and Rating Table

i. Rating Scales

Progress towards results: use the following rating scale	
Highly Satisfactory (HS)	Project is expected to achieve or exceed all its major global environmental objectives, and yield substantial global environmental benefits, without major shortcomings. The project can be presented as "good practice".
Satisfactory (S)	Project is expected to achieve most of its major global environmental objectives, and yield satisfactory global environmental benefits, with only minor shortcomings.
Moderately Satisfactory (S)	Project is expected to achieve most of its major relevant objectives but with either significant shortcomings or modest overall relevance. Project is expected not to achieve some of its major global environmental objectives or yield some of the expected global environment benefits.
Moderately Unsatisfactory (MU)	Project is expected to achieve its major global environmental objectives with major shortcomings or is expected to achieve only some of its major global environmental objectives.
Unsatisfactory (U)	Project is expected not to achieve most of its major global environment objectives or to yield any satisfactory global environmental benefits.
Highly Unsatisfactory (HU)	The project has failed to achieve, and is not expected to achieve, any of its major global environment objectives with no worthwhile benefits.
Adaptive management AND Management Arrangements: use the following rating scale	
Highly Satisfactory (HS)	The project has no shortcomings and can be presented as "good practice".
Satisfactory (S)	The project has minor shortcomings.
Moderately Satisfactory (S)	The project has moderate shortcomings.
Moderately Unsatisfactory (MU)	The project has significant shortcomings.
Unsatisfactory (U)	The project has major shortcomings.
Highly Unsatisfactory (HU)	The project has severe shortcomings.
Sustainability: use the following rating scale	
Likely (L)	There are no or negligible risks that affect this dimension of sustainability/linkages
Moderately Likely (ML)	There are moderate risks that affect this dimension of sustainability/linkages
Moderately Unlikely (MU)	There are significant risks that affect this dimension of sustainability/linkages
Unlikely (U)	There are severe risks that affect this dimension of sustainability

ii. Draft Rating Table

Category	Rating	Qualitative Summary
Progress Toward Results		
Project Design		
Relevance		
Progress Toward Outcomes		
Results		
Effectiveness		
Adaptive Management		
Work Planning		
Finance and Co-finance		
Monitoring and Evaluation Systems		
Risk Management		
Reporting		
Management Arrangements		

Efficiency		
Sustainability		
Overall Likelihood of Sustainability of Results		
Financial and Economic Risks		
Socio-political Risk		
Institutional Framework and Governance Risks		
Environmental Risks		

Note: Aspects in italics indicate the main OECD-DAC evaluation criteria, as outlined in the AF M&E framework.

D. Annex 4: Documents Reviewed

- Project Document
- AF Project Performance Reports (PPRs) & AF Tracking Tool
- Quarterly progress reports and work plans of the various implementation task teams
- Audit reports
- Financial scorecards
- Mission reports
- M & E Operational Guidelines, all monitoring reports prepared by the project
- Financial and administration guidelines
- Project operational guidelines, manuals and systems
- Minutes of the Project Board Meetings
- Maps
- The AF Operations Guidelines
- UNDP Monitoring and Evaluation Frameworks

E. Annex 5: Interview Guide

Overview: The questions under each topic area are intended to assist in focusing discussion to ensure consistent topic coverage and to structure data collection, and are not intended as verbatim questions to be posed to interviewees. When using the interview guide, the interviewer should be sure to target questions at a level appropriate to the interviewee. The interview guide is one of multiple tools for gathering evaluative evidence, to complement evidence collected through document reviews and other data collection methods; in other words, the interview guide does not cover all evaluative questions relevant to the evaluation.

Key
Bold = AF Evaluation Criteria

I. PLANNING / PRE-IMPLEMENTATION
   A. **Relevance**
      i. Did the project's objectives fit within the priorities of the local government and local communities?
      ii. Did the project's objectives fit within national priorities?

iii. Did the project's objectives fit AF strategic priorities?
iv. Did the project's objectives support implementation of the relevant multi-lateral environmental agreement?

B. Country-drivenness / Participation
   i. How did the project concept originate?
   ii. How did the project stakeholders contribute to the project development?
   iii. Do local and national government stakeholders support the objectives of the project?
   iv. Do the local communities support the objectives of the project?
   v. Are the project objectives in conflict with any national level policies?

C. Monitoring and Evaluation Plan / Design
   i. Were monitoring and reporting roles clearly defined?
   ii. Was there either an environmental or socio-economic baseline of data collected before the project began?

II. MANAGEMENT / OVERSIGHT

A. Project management
   i. What were the implementation arrangements?
   ii. Was the management effective?
   iii. Were workplans prepared as required to achieve the anticipated outputs on the required timeframes?
   iv. Did the project develop and leverage the necessary and appropriate partnerships with direct and tangential stakeholders?
   v. Were there any particular challenges with the management process?
   vi. If there was a steering or oversight body, did it meet as planned and provide the anticipated input and support to project management?
   vii. Were risks adequately assessed during implementation?
   viii. Did assumptions made during project design hold true?
   ix. Were assessed risks adequately dealt with?
   x. Was the level of communication and support from the implementing agency adequate and appropriate?

B. Flexibility
   i. Did the project have to undertake any adaptive management measures based on feedback received from the M&E process?
   ii. Were there other ways in which the project demonstrated flexibility?
   iii. Were there any challenges faced in this area?

C. **Efficiency** (cost-effectiveness)
   i. Was the project cost-effective?
   ii. Were expenditures in line with international standards and norms?
   iii. Was the project implementation delayed?
   iv. If so, did that affect cost-effectiveness?
   v. What was the contribution of cash and in-kind co-financing to project implementation?
   vi. To what extent did the project leverage additional resources?

D. Financial Management
    i. Was the project financing (from the AF and other partners) at the level foreseen in the project document?
    ii. Where there any problems with disbursements between implementing and executing agencies?
    iii. Were financial audits conducted with the regularity and rigor required by the implementing agency?
    iv. Was financial reporting regularly completed at the required standards and level of detail?
    v. Did the project face any particular financial challenges such as unforeseen tax liabilities, management costs, or currency devaluation?
E. Co-financing
    i. Was the in-kind co-financing received at the level anticipated in the project document?
    ii. Was the cash co-financing received at the level anticipated in the project document?
    iii. Did the project receive any additional unanticipated cash support after approval?
    iv. Did the project receive any additional unanticipated in-kind support after approval?
F. Monitoring and Evaluation
    i. Project implementation M&E
        a. Was the M&E plan adequate and implemented sufficiently to allow the project to recognize and address challenges?
        b. Were any unplanned M&E measures undertaken to meet unforeseen shortcomings?
        c. Was there a mid-term evaluation?
        d. How were project reporting and monitoring tools used to support adaptive management?
    ii. Environmental and socio-economic monitoring
        a. Did the project implement a monitoring system, or leverage a system already in place, for environmental monitoring?
        b. What are the environmental or socio-economic monitoring mechanisms?
        c. Have any community-based monitoring mechanisms been used?
        d. Is there a long-term M&E component to track environmental changes?
        e. If so, what provisions have been made to ensure this is carried out?
D. Full disclosure
    i. Did the project meet this requirement?
    ii. Did the project face any challenges in this area?

III. ACTIVITIES / IMPLEMENTATION

A. **Effectiveness**
   i. How have the stated project objectives been met?
   ii. To what extent have the project objectives been met?
   iii. What were the key factors that contributed to project success or underachievement?
   iv. Can positive key factors be replicated in other situations, and could negative key factors have been anticipated?

B. Stakeholder involvement and public awareness *(participation)*
   i. What were the achievements in this area?
   ii. What were the challenges in this area?
   iii. How did stakeholder involvement and public awareness contribute to the achievement of project objectives?

IV. RESULTS

A. Outputs
   i. Did the project achieve the planned outputs?
   ii. Did the outputs contribute to the project outcomes and objectives?

B. Outcomes
   i. Were the anticipated outcomes achieved?
   ii. Were the outcomes relevant to the planned project impacts?

C. Impacts
   i. Was there a logical flow of inputs and activities to outputs, from outputs to outcomes, and then to impacts?
   ii. Did the project achieve its anticipated/planned impacts?
   iii. Why or why not?
   iv. If impacts were achieved, were they at a sufficient scale, and did they contribute to AF results?
   v. If impacts have not yet been achieved, are the conditions (enabling environment) in place so that they are likely to eventually be achieved?

D. Replication strategy, and documented replication or scaling-up *(catalytic role)*
   i. Did the project have a replication plan?
   ii. Was the replication plan "passive" (i.e. the project activities are potentially replicable by others) or "active" (i.e. the project specifically took actions to catalyze replications by others)?
   iii. Is there evidence that replication or scaling-up occurred within the country?
   iv. Did replication or scaling-up occur in other countries?

V. LESSONS LEARNED

A. What were the key lessons learned in each project stage?
B. In retrospect, would the project participants have done anything differently?

VI. SUSTAINABILITY

A. Financial

i. To what extent are the project results dependent on continued financial support?
ii. What is the likelihood that any required financial resources will be available to sustain the project results once the AF assistance ends?
iii. Was the project successful in identifying and leveraging co-financing?
iv. What are the key financial risks to sustainability?

B. Socio-Political
i. To what extent are the project results dependent on socio-political factors?
ii. What is the likelihood that the level of stakeholder ownership will allow for the project results to be sustained?
iii. Is there sufficient public/stakeholder awareness in support of the long-term objectives of the project?
iv. What are the key socio-political risks to sustainability?

C. Institutions and Governance
i. To what extent are the project results dependent on issues relating to institutional frameworks and governance?
ii. What is the likelihood that institutional and technical achievements, legal frameworks, policies and governance structures and processes will allow for the project results to be sustained?
iii. Are the required systems for accountability and transparency and the required technical know-how in place?
iv. What are the key institutional and governance risks to sustainability?

D. Ecological
i. Are there any environmental risks that can undermine the future flow of project impacts?

F. Annex 6: Evaluation Mission Itinerary

Interviewed by phone:

Mr. Jitzchak Alster, International Water Law Expert (Project advisor)
Ms. Anna Kaplina, UNDP Regional Technical Advisor

Draft Evaluation Mission Itinerary, September 29 – October 3rd, 2014

Date and Time	Activity	Venue	Participants
Monday, September 29th	***Meetings in Ashgabat***		
2:45 am	Josh Brann arrival at international airport, Turkish airlines flight 322 from Istanbul, pick-up by UNDP driver, transfer to "Grand Turkmen" hotel		
8:00 am	Meeting with project team – Overview presentation / discussion of main project expected results (outcomes and outputs), activities completed, successes/challenges, and implementation progress so far	UNDP Offices	Mr. Rovshen Nurmuhamedov, UNDP Environment Programme Specialist Mr. Geldi Myradov, UNDP Programme Assistant Mr. Merdan Hudaykuliyev, Head of PIU, Procurement Assistant Mr. Ahmed Shadurdyev, AF Project Manager Ms. Mahrijemal Hudayberdiyeva, CRM Project Manager Mr. Mathew Savage, ICTA Mr. Stanislav Aganov, AF National Expert Mr. Sultan Veysov, AF National Expert Mr. Yolbars Kepbanov, AF National Expert Mr. Muhammet Nepesov, AF National Expert Mr. Gaygysyz Kurbanseidov, AF Field Technical Assistant Mr. Akmurad Gardashev, AF Trainer on Community Mobilization Ms. Victoria Saygusheva, PIU Project Assistant on Logistics Ms. Bahara Mamedova, PIU Project Assistant for Finance Ms. Ayna Allaberdyeva, PIU Project Assistant for HR Mr. Josh Brann, International Consultant Ms. Zohra Meredova – interpreter or Mr. Khadjiev Djemshid, interpreter. **Note**: Both interpreters are *not available due to the remote distance of the region.*
9:00 am - 09:30 am	Initial briefing with UNDP Introduction / evaluation overview for UNDP RR/DRR	UNDP Offices	Mr. Josh Brann, International Consultant Mr. Rovshen Nurmuhamedov, UNDP Environment Programme Specialist Mr. Geldi Myradov, UNDP Programme Assistant Mr. Ahmed Shadurdyev, Project Manager

Date and Time	Activity	Venue	Participants
			Mr. Mathew Savage, ICTA Ms. Zohra Meredova – interpreter Ms. Jacinta Barrins, UNDP RR Ms. Cao Lin, UNDP DRR
	Field visit to Karakum project field site		
09:30 am	Depart by project vehicle to Karakum region (Ashgabat-Karakum project site – approximately 260 km)		
13:00 pm	• Arrival – introductory meeting with local stakeholders • Visit project sites in field, discussion of project activities and expected results, progress, problems, sustainability, etc. • Evaluation meeting with local stakeholders • Meet with any other local project stakeholders		Mr. Kakabay Baysahedov, local project coordinator Mr. Muratdurdy Ovezov, Head of Farm#1 Head of Farm#2 Representatives of local authority and local community Mr. Mathew Savage, ICTA Mr. Ahmed Shadurdyev, Project manager Mr. Gaygysyz Kurbanseidov, AF Field Technical Assistant Mr. Josh Brann, International Consultant Ms. Zohra Meredova - interpreter or Mr. Khadjiev Djemshid, interpreter Driver – Mr. Atajan Annaev Driver – Mr. Aman Kurbanov
13:00 pm	*Lunch break*		
14:00 pm	• Arrival – introductory meeting with local stakeholders • Visit project sites in field, discussion of project activities and expected results, progress, problems, sustainability, etc. • Evaluation meeting with local stakeholders Meet with any other local project stakeholders		Mr. Kakabay Baysahedov, local project coordinator Mr. Muratdurdy Ovezov, Head of Farm#1 Head of Farm#2 Representatives of local authority and local community Mr. Mathew Savage, ICTA Mr. Ahmed Shadurdyev, Project manager Mr. Gaygysyz Kurbanseidov, AF Field Technical Assistant Mr. Josh Brann, International Consultant Ms. Zohra Meredova - interpreter or Mr. Khadjiev Djemshid, interpreter Driver – Mr. Atajan Annaev Driver – Mr. Aman Kurbanov
Tuesday, September 30	***Field visit to Nohur project field site***		
6:00 am – 9:30 am	*Departure from Karakum project region to Ashgabat*		
10:00 am	Depart by project vehicle to Nohur region		
13:00 am	• Arrival to Nohur region		
13:00 pm	*Lunch break*		

Date and Time	Activity	Venue	Participants
14:00 pm	• Arrival – introductory meeting with local stakeholders • Visit project sites in field, discussion of project activities and expected results, progress, problems, sustainability, etc. • Evaluation meeting with local stakeholders • Meet with any other local project stakeholders		Mr. Gurbanmuhammet Abdyrahmanov – local project coordinator Mr. Gichgeldy Seyitnurov – AF Gardener Representatives of local authority and local community Mr. Mathew Savage, ICTA Mr. Ahmed Shadurdyev, Project manager Mr. Gaygysyz Kurbanseidov, AF Field Technical Assistant Mr. Josh Brann, International Consultant Ms. Zohra Meredova – interpreter or Mr. Khadjiev Djemshid, interpreter Driver – Mr. Atajan Annaev Driver – Mr. Aman Kurbanov
Wednesday, October 1	***Field visit to Sakarchaga project field site***		
6:00 am – 9:00 am	*Departure from Nohur project region to Ashgabat*		
13:10 pm	*Flight from Ashgabat to Mary*		
13:50 pm	Arrival to Mary		
14:30	Lunch break		
15:30	• Arrival – introductory meeting with local stakeholders • Visit project sites in field, discussion of project activities and expected results, progress, problems, sustainability, etc. • Evaluation meeting with local stakeholders • Meet with any other local project Stakeholders		Mr. Ovezdurdy Jumadurdyev- local project coordinator Mr. Gichgeldy Seyitnurov – AF Gardener Representatives of local authority and local community Mr. Mathew Savage, ICTA Mr. Ahmed Shadurdyev, Project manager Mr. Gaygysyz Kurbanseidov, AF Field Technical Assistant Mr. Josh Brann, International Consultant Ms. Zohra Meredova - interpreter or Mr. Khadjiev Djemshid, interpreter Driver – Mr. Atajan Annaev Driver – Mr. Aman Kurbanov
Thursday, October 2	***Meetings in Ashgabat***		
09:40 am	*Flight from Mary to Ashgabat*		
10:20 am	*Arrival to Ashgabat*		
11:00 am	Meeting with Mr. Muhammet Durikov, (National Project Coordinator), Director of the National Institute of Deserts, Flora and Fauna Ministry of Nature Protection	Ministry of Nature Protection	Mr. Muhammet Durikov, (National Project Coordinator), Director of the National Institute of Deserts, Flora and Fauna Akyniyazov A. Deputy Director NIDFF Mr. Josh Brann, International Consultant Ms. Zohra Meredova - interpreter or Mr. Khadjiev Djemshid, interpreter
12:00 pm	Meeting with the representative of the Ministry of Agriculture	Ministry of Agriculture	Mr. Josh Brann, International Consultant Ms. Zohra Meredova - interpreter or Mr. Khadjiev Djemshid, interpreter

Date and Time	Activity	Venue	Participants
1:00 pm	*Lunch break*		
3:30 pm	Meeting with the representative Ministry of Water Economy	Ministry of Water Economy	Mr. Josh Brann, International Consultant Ms. Zohra Meredova - interpreter or Mr. Khadjiev Djemshid, interpreter
	Accommodations – "Grand Turkmen" Hotel, Ashgabat		
Friday, October 3rd	***Meetings in Ashgabat***		
9:00 am	Meetings with any other relevant stakeholders / project board members in Ashgabat - Representative of the National Committee for Hydrometeorology - Representative of the Mejlis - Representative of "Turkmensuvylymtaslama" institute of the ministry of Water economy		Mr. Josh Brann, International Consultant Ms. Zohra Meredova - interpreter or Mr. Khadjiev Djemshid, interpreter
10:30 am	Follow-up meeting with project team to discuss results framework indicators and targets, delayed workplan items, potential risks for 2nd half of implementation, possible recommendations, etc.	Project Offices	Mr. Josh Brann, International Consultant Mr. Mathew Savage, ICTA Mr. Ahmed Shadurdyev, Project manager
13:00 pm	*Lunch break*		Mr. Josh Brann, International Consultant
2:30 pm	Evaluation debriefing for UNDP and project team – initial impressions and potential recommendations for from the evaluation	UNDP conference room?	Mr. Rovshen Nurmuhamedov, UNDP Environment Programme Specialist Mr. Geldi Myradov, UNDP Programme Assistant Mr. Merdan Hudaykuliyev, Head of PIU, Procurement Assistant Mr. Ahmed Shadurdyev, AF Project Manager Ms. Mahrijemal Hudayberdiyeva, CRM Project Manager Mr. Mathew Savage, ICTA Mr. Yolbars Kepbanov, AF National Expert Mr. Gaygysyz Kurbanseidov, AF Field Technical Assistant Mr. Akmurad Gardashev, AF Trainer on Community Mobilization Ms. Victoria Saygusheva, PIU Project Assistant on Logistics Ms. Bahara Mamedova, PIU Project Assistant for Finance Ms. Ayna Allaberdyeva, PIU Project Assistant for HR Mr. Josh Brann, International Consultant Ms. Zohra Meredova - interpreter or Mr. Khadjiev Djemshid, interpreter
3:15 pm	Evaluation debriefing for UNDP RR/DRR (if desired)	UNDP RR office	
4:00 pm	*Departure for airport*		
6:40 pm	*Flight departure to Istanbul on Hahn Air Systems flight 5096, operated by Turkmenistan Air*		

G. Annex 7: Results Framework Indicator Target Assessment

Component	Indicator	Baseline	Target for Project End	MTE Assessment
Outcome 1: Institutional capacity to develop climate resilient water policies in agriculture strengthened	Indicator 1.1: Water code subsidiary laws and regulations that introduce progressive pricing policies and communal management for local water services are in place and operational.	Government has made progressive steps towards improving water management systems. It invests heavily in the improvement and upgrade of water infrastructure and looks out for more advanced technologies. However, water policies remain outdated as well as poorly enforced due to underdeveloped regulations and subsidiary legislation. Tools and methods are missing to identify the most cost-effective adaptation options in the water policies. Water pricing is largely inadequate.	A package of amendments to water code with proposed water tariff and other economic instruments developed and submitted for adoption by end of 2012. Update of the water code to ensure explicit recognition of on climate impacts on water resource availability by end of 2013. At least 2 sets of sub- regulations developed under the Water Code to implement a) progressive and differentiated tariffs, b) support for water delivery services under communal management	Achievement likely. Based on information gathered during the evaluation, it appears likely that the project will succeed in influencing the water code revisions and associated regulations related to water management. The extent to which the project recommendations are actually incorporated remains to be seen, and will only be assessable once the legislative and regulatory changes are complete.
Output 1.1. Socio-economic impact of climate change on water availability costed and documented, including cost-benefit analysis of adaptation measures	Indicator 1.1.1: Study on socio-economic impacts of climate change on water availability, including cost-benefit analysis of adaptation measures conducted	0	Study on socio-economic impacts of climate change on water availability, including cost-benefit analysis of adaptation measures conducted	Achievement likely. The output may be achieved in terms of completion of the socio-economic studies, but the project needs to ensure that the studies are actually used to inform appropriate changes in water management. The first part of the socio-economic assessment, related to the national assessment of costs and benefits, has been completed, and two inter-ministerial workshops were held. The 2nd part of the socio-economic study, related to the assessment of costs and benefits of local adaptation measures, is in progress and it is expected it will be completed within a few months. It is anticipated that the socio-economic reports will feed into national reporting to the UNFCCC, and the project will take additional measures to disseminate the information to policy makers, such as producing policy briefs.
	Indicator 1.1.2: Number of water legislative acts amended based on	0	At least 2	Achievement likely. See further information under Output 1.2. On the whole the project needs to ensure that the policy gaps that the

Component	Indicator	Baseline	Target for Project End	MTE Assessment
	climate change cost estimations			project is targeting are addressed, rather than focusing on a specific number of legislation or policy changes.
Output 1.2. A package of modifications in the water code, with particular focus on communal water management; and financial incentives for water efficiency (e.g. differentiated and progressive tariff) developed	Indicator 1.2.1: Number of water regulations to introduce progressive and differentiated tariff and water delivery services under communal management	0	At least 2	Achievement likely. The project is providing recommendations and inputs to the revision of the water code, and other relevant legislation and regulations, such as the law on Daihans. In general it is preferable for indicators to focus on the outcome level results, such as the policy gaps that are being addressed, rather than the number of legislative acts. Alternatively, the specific legislative acts to be addressed can be directly indicated.
Outcome 2: Resilience to climate change enhanced in targeted communities through the introduction of community-based adaptation approaches	Indicator 2. 1: Number of community based adaptation solutions implemented at the local level upon project closure.	Some of the coping mechanisms employed by farmers, agri-pastoralists and pastoralists in the main agro-ecological systems are increasingly strained due to mounting water deficits. A combination of innovative and traditional measures hasn't been tested to improve water capture, optimize water demand and improve water efficient applications. Over 2,000,000 people live in the target regions with the majority engaged in agriculture, mainly in marginal lands and having very limited access to stable water delivery services.	At least one water harvesting technique and saving measure implemented in Nohur region to benefit 4,000 agri-pastoralists by end of 2014 At least two watering points established in Karakum region to benefit 8,000 farmers and pastoralists by end of 2014 Set of at least three agronomic measures (terracing, intercropping, saksaul planting (Karakum)) implemented in at least 3 communities by end of 2014 Canal level irrigation improvement measures implemented in the Sakar-Chaga region to benefit 20,000 people by end of the project	Achievement likely, and the project will likely significantly exceed the target. However, the level and directness of the benefit for individuals in each of the target regions varies greatly. For example, in Nohur the project has supported the construction of small-scale dams as watering points for livestock, which generally benefit all of the communities whose herds use the range area where the water points are, which may equal 4,000 people or greater. However the project is also supporting specific irrigation measures and techniques, such as drip irrigation and water storage tanks, in one specific village in the region, which will have a much greater benefit for the approximately 1,000 people in that village.
	Indicator 2.2: % of population with improved water management practices resilient to climate change impacts in the targeted regions.		At least 70% agri-pastoralists of the Nohur At least 50% farmers in the Karakum desert region At least 50% farmers in the Sakarchaga area	Achievement likely, also related to previous indicator. However, it would be helpful to have a clearer definition of what should be considered as "improved water management practices". The project results have greatly benefited from the significant contributions of the targeted communities, through in-kind co-financing of infrastructure completion, and support for community-based planning.

Component	Indicator	Baseline	Target for Project End	MTE Assessment
Output 2.1:At least 4,000 agri-pastoralists of the Nohur mountainous region develop and implement water harvesting and saving techniques (such as slope terracing, small rainwater collection dams, contour and stone bunds, planting pits, tillage, mulching) to improve soil moisture levels	Indicator 2.1.1: water harvesting and saving techniques demonstrated/tested in targeted Nohur area	0	At least one water harvesting technique and saving measure	Already achieved. However, it will be important for the project to clearly document the actual economic benefits generated for the community, which is being assessed as part of the 2nd part of the socio-economic study. In addition, the project must continue to emphasize the value of the demonstration of these activities, and focus on information and lesson sharing to catalyze greater results than for the single community targeted, which represents only a tiny fraction of the overall need.
Output 2.2: At least 8,000 farmers implement community-based well and watering point management measures, including sand fixation and introduction of drought resistant traditional grain varieties in the Karakum desert region	Indicator 2.2.1: Community based well and watering point management measures tested and demonstrated in targeted Karakum area	0	At least two watering points	Already achieved. See comments under previous indicator. The project must continue to focus on getting this information into the hands of decision-makers, as the government clearly has the resources to expand the watering point network in the Karakum region by itself, considering the investments clearly made in the capital city.
Output 2.3. At least 20,000 farmers in the Sakarchaga area benefit from improved irrigation services through the introduction of canal level, localized management practice	Indicator 2.3.1: Canal level management tested and demonstrated in targeted Sakarchaga area	0	At least one measure	Achievement likely. See previous comments. The progress on the project results in Sakarchaga is a bit slower than in the other two target regions, but it also involves the most complex community-level changes in terms of modifying the Daihan level water management decision-making process, along with the coordination with the relevant government institutions.
Outcome 3: Community-managed water delivery services introduced to benefit over 30,000 farmer and pastoralist communities in the three target agro-ecological zones.	Indicator 3.1 Number of associations with improved institutional capacity to deliver water services to target communities.	The State continues to play a far-reaching and predominant role in the economy and acts as the main provider in ensuring adequate living standards of the population, with subsidies, price controls and the free provision of utilities underpinning the system. This has been possible largely due to revenues from the hydrocarbons sector. However, it poses large	At least 6 associations have clear mandates, institutional capacities and skills to manage and deliver water services to the target communities by end of 2013 At least 6 community plans on water adaptation have been designed and budgeted through the government's social development programmes by end of the project At least 6 local water adaptation	Achievement uncertain. The project is working with a total of more than six groups in the three target regions (1 WUG in Nohur, 2 farms in Karakum, and 4 brigades in Sakarchaga), but progress in enhancing the capacity of these community organizations to improve water management is uneven. There is greater progress in Nohur, some progress in Karakum, and less progress in Sakarchaga. The project is still working to influence and modify the official regulations for the

Component	Indicator	Baseline	Target for Project End	MTE Assessment
		budgetary burden and results in unsustainable and ineffective water delivery services to farmer and pastoralists communities. Self-functioning and maintained services with the direct engagement of communities are not practiced. Despite existence of water user and farmer associations their role and capacities are limited to improve the water management and delivery options.	investment projects have been funded through WUA and associated community organizations At least three lessons learned notes per targeted agro-ecological system, developed and widely disseminated through knowledge networks for further replication by end of project	functioning of WUA/WUGs. There are other community water management structures in place which deal with the allocation of water in the community, but it is expected that the WUA/WUGs will further support the efficient use of water at the farm level in the areas under their jurisdiction. The project is continuing to make progress and working with the community-groups to form and implement the WUA approach, but it is uncertain what level of progress will be made by the end of the project, and what the level of sustainability will be at that point.
	Indicator 3.2: % of targeted population with more secure access to water services in the face of climate change where communal management systems adopted.		By end of the project at least 80% of targeted population of approximately 30,000 people has access to improved water services that are resilient to drought and climate aridification	Achievement uncertain, though the indicator would significantly benefit from a clear definition of how this is assessed in terms of what the threshold is to assess "access", and what is considered "improved" water services. This is partially influenced by the demonstration activities at the field level in each of the three project target regions, but also is clearly linked to the functioning of the WUAs the project is working to establish, so achievement of this indicator is also depending on the sustainable functioning of the WUAs.
Output 3.1: Mandates and institutional functions of local associations strengthened to improve local water services that are more resilient to increasing water stress and benefit at least 30,000 farmers and pastoralists	Indicator 3.1.1: Number of associations with modified mandates strengthening their institutional roles to manage and deliver water services to the target communities	0	At least 6 associations	Achievement uncertain. Duplication with indicator 3.1, see previous assessment for that indicator.

Component	Indicator	Baseline	Target for Project End	MTE Assessment
Output 3.2: Based on VCA assessments, community-based adaptation plans with particular focus on water delivery services designed and implemented through the government's social development programmes with direct engagement of at least 30,000 farmers and pastoralists	Indicator 3.2.1: Number of community plans has been budgeted through the government's social development programmes	0	At least 6 community plans on water adaptation	Achievement uncertain. The project is working to develop community plans for efficient, climate-resilient water development at the community level. These plans would be integrated with and provide inputs to the government's community-development investment plans, to leverage further government financing for additional and expanded application of efficient water management technologies and techniques. This is the critical link for the catalytic role for the project, to leverage the experience from the field-level demonstration activities into broader government investment in the water sector. There are two examples so far in Sakarchaga where government investment is being leveraged for more efficient irrigation infrastructure (e.g. financing for pivot irrigation in 350 hectares), but it remains to be seen if similar financing will be leveraged in Nohur or Karakum.
Output 3.3: At least 6 projects funded up to a total of $400,000 through WUAs and associated community groups	Indicator 3.3.1: Number and value of projects through the WUAs	0	At least 6 projects of a total budget of $400,000	Achievement likely. This is a basic implementation indicator for the AF project, indicating that this amount of project resources will be invested in demonstration projects across the pilot regions. This is a second level of activity following the initial direct project investment under Outcome 2, as the investment under this Output will be done through the WUAs that are being established. Although not yet achieved, there is good progress toward the development of these investment plans through community prioritization and the development of the community plans (Output 3.2), and it is anticipated that the project will succeed in completing this investment by the end of the project.

Component	Indicator	Baseline	Target for Project End	MTE Assessment
Output 3.4: Lessons learned on community-based adaptation options under various agro-climatic conditions of Turkmenistan disseminated through ALM and other networks	Indicator 3.4.1: Number of lessons learned notes formulated	0	At least three lessons learned	Achievement likely. The project has been highly active in producing and generating articles, press releases, and short summaries of the project activities, which have been published on the project website and the ALM website. At the same time, the project still needs to focus on producing highly impactful case study documents that clearly outline the experience of the project and identify key lessons for potential wider application in Turkmenistan and beyond. The project team has plans to develop these types of lessons learned documents, and will be continuing to work on this. This is also an activity that will be most beneficial closer to the end of the project, to fully capture the project's experience. There are no anticipated challenges in achieving this target, but it needs to remain forefront in the project team's long-term workplanning, as it is a critical element for the project to catalyze a wider benefit beyond just the direct benefits to the project pilot communities.
	Indicator: 3.4.2: Number of lessons learned included in the ALM and other knowledge networks	0	At least three lessons learned	Achievement likely, see previous indicator assessment.

H. Annex 8: Turkmenistan AF Project Contributions to Adaptation Fund Strategic Results

Project Component	AF Outcome / Output	AF Outcome / Output Indicators	Turkmenistan AF Project Baseline	Turkmenistan AF Project Target
Component 1	Outcome 7: Improved policies and regulations that promote and enforce resilience measures	7. Climate change priorities are integrated into national development strategy	Scale 1-5: Baseline = 2: Most not integrated in Water code of Turkmenistan, (2004). The National Strategy on Climate Change was adopted. There are sections on the use of adaptive techniques in agriculture. Government has made progressive steps towards improving water management systems. It invests heavily in the improvement and upgrade of water infrastructure and looks out for more advanced technologies. However, water policies remain outdated as well as poorly enforced due to underdeveloped regulations and subsidiary legislation. Tools and methods are missing to identify the most cost-effective adaptation options in the water policies. Water pricing is largely inadequate. The current water policies burden the state budget and do not free resources for service improvement to farmers, especially local small holders. At the same time, farmers involved in large scale productions of water thirsty crop varieties do not receive adequate price signals to use water more efficiently. Given the increasing water shortages and priorities assigned to cash crop production the small holder subsistence farmers bear a disproportionate burden of exacerbating water deficits.	Scale 1-5: Target = 3: Some (integrated) in Water code of Turkmenistan, (2004) A package of amendments to water code with proposed water tariff and other economic instruments developed and submitted for adoption by end of 2012. Update of the water code to ensure explicit recognition of on climate impacts on water resource availability by end of 2013. At least 2 sets of sub- regulations developed under the Water Code to implement a) progressive and differentiated tariffs, b) support for water delivery services under communal management.

Project Component	AF Outcome / Output	AF Outcome / Output Indicators	Turkmenistan AF Project Baseline	Turkmenistan AF Project Target
Component 2	Outcome 3: Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level	2.1. No. and type of targeted institutions with increased capacity to minimize exposure to climate variability risks	Scale 1-5: Baseline = 1: Aware of neither predicted adverse impacts of climate change nor of appropriate responses. Some of the coping mechanisms employed by farmers, agri-pastoralists and pastoralists in the main agro-ecological systems are increasingly strained due to mounting water deficits. A combination of innovative and traditional measures hasn't been tested to improve water capture, optimize water demand and improve water efficient applications. Over 2,000,000 people live in the target regions with the majority engaged in agriculture, mainly in marginal lands and having very limited access to stable water delivery services.	Scale 1-5: Target = 4: Mostly aware At least 70% of agri-pastoralists and farmers of the Nohur mountainous region trained, develop and implement water harvesting and saving techniques. At least one water harvesting technique and saving measures implemented in Nohur region to benefit 70% agri-pastoralists At least 50% of farmers implement community-based well and watering point management measures, including sand fixation. At least two watering points established for at least 50%. Set of at least three agronomic measures implemented in at least 3 communities At least 50% farmers in Sakarchaga area to benefit from improved irrigation services through the introduction of canal level, localized management practice.
Component 3	Outcome 2: Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses	2.1. No. and type of targeted institutions with increased capacity to minimize exposure to climate variability risks	*Indicator Unit: Qualitative and Quantitative measures of capacity within targeted institutions.* Baseline: The State continues to play a far-reaching and predominant role in the economy and acts as the main provider in ensuring adequate living standards of the population, with subsidies, price controls and the free provision of utilities underpinning the system. This has been possible largely due to revenues from the hydrocarbons sector. However, it poses	*Indicator Unit: Qualitative and Quantitative measures of capacity within targeted institutions.* Target: WUAs established/strengthened in local communities in three pilot regions. Mandates and institutional functions of local associations strengthened to improve local water services that are more resilient to increasing water stress and benefit at least 40% farmers and pastoralists.

Project Component	AF Outcome / Output	AF Outcome / Output Indicators	Turkmenistan AF Project Baseline	Turkmenistan AF Project Target
			large budgetary burden and results in unsustainable and ineffective water delivery services to farmer and pastoralists communities. Self-functioning and maintained services with the direct engagement of communities are not practiced. Despite existence of water user and farmer associations their role and capacities are limited to improve the water management and delivery options.	At least 6 associations have clear mandates, institutional capacities and skills to manage and deliver water services to the target communities by end of 2013 At least 6 community plans on water adaptation have been designed and budgeted through the government's social development programmes by end of the project At least 4 local water adaptation investment projects have been funded through WUA and associated community organizations By end of the project at least 80% of targeted population of approximately 50% has access to improved water services that are resilient to drought and climate aridification. At least three lessons learned notes per targeted agro-ecological system, developed and widely disseminated through knowledge networks for further replication by end of project